ORDER NO. SD7706-1239

Service Manual

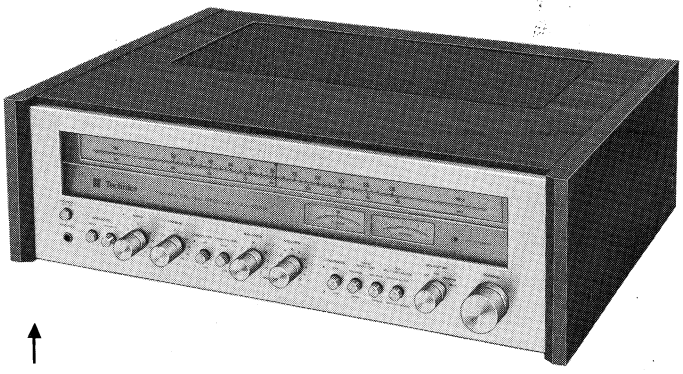
FM/AM STEREO RECEIVER

SA-5370

(XA), (XAL), (XE), (XGF)
(XSW), (XG), (XGH), (XSD)

SA-5370K

(XSW), (XG), (XGH), (XSD), (XGF)



This photo shows only the products for [XA] and [XAL].

* SA-5370K is different in appearance and colour-tone.
* Cabinet colour differs according to area.

* The model SA-5370 (XA) is available in Asia, Latin America, Middle East and Africa only.
* The model SA-5370 (XAL) is available in Australia only.
* The model SA-5370 (XE) is available in England only.
* The model SA-5370/K (XGF) is available in France only.
* The model SA-5370/K (XSW) is available in Switzerland only.
* The model SA-5370/K (XG) is available in European only.
* The model SA-5370/K (XGH) is available in Holland only.
* The model SA-5370/K (XSD) is available in Scandinavia only.

TECHNICAL SPECIFICATIONS

Specifications are subject to change without notice for further improvement.

[DIN 45 500]

AMPLIFIER SECTION

1 kHz continuous power	
both channels driven	2 x 64 W (4Ω), 2 x 53 W (8Ω)
20 Hz ~ 20 kHz continuous power	
both channels driven	2 x 56 W (4Ω), 2 x 48 W (8Ω)
40 Hz ~ 16 kHz continuous power	
both channels driven	2 x 56 W (4Ω), 2 x 48 W (8Ω)
Power bandwidth	
both channels driven at 4Ω, 8Ω,	7 Hz ~ 50 kHz, −3 dB
Total harmonic distortion rated power at 1 kHz	0.1% (4Ω, 8Ω)
rated power at 20 Hz ~ 20 kHz	0.1% (4Ω, 8Ω)
rated power at 40 Hz ~ 16 kHz	0.1% (4Ω, 8Ω)
−26 dB rated power at 1 kHz	0.15% (4Ω)
50 mW power at 1 kHz	0.18% (4Ω)
Intermodulation distortion	
rated power at 250 Hz: 8000 Hz = 4:1, 4Ω	0.1%
rated power at 50 Hz: 7 kHz = 4:1 SMPTE, 8Ω,	0.1%
Damping factor	25 (4Ω), 50 (8Ω)
Input sensitivity and Impedance	
PHONO	2.5mV/47 kΩ
AUX, TAPE 2 PLAYBACK	150mV/33 kΩ
TAPE1 PLAYBACK, REC/PLAY input	180 mV/39 kΩ
PHONO maximum input voltage (1 kHz, RMS)	150mV
S/N	
rated power PHONO	65 dB (IHF, A: 78 dB)
AUX	80 dB (IHF, A: 95 dB)
−26 dB rated power	**PHONO** 55 dB, **AUX** 55 dB
50 mW power output	**PHONO** 55 dB, **AUX** 55 dB
Frequency response	**PHONO** RIAA standard curve ±0.2 dB
	AUX 20 Hz ~ 20 kHz, ±0.5 dB
	10 Hz ~ 45 kHz, −1 dB
Tone controls BASS	50 Hz, +10 dB ~ −10 dB
TREBLE	10 kHz, +10 dB ~ −10 dB
Loudness control (volume at −30 dB)	50 Hz, +10 dB
Low filter	100 Hz, −6 dB/oct.
High filter	7 kHz, −6 dB/oct.
Output voltage	
TAPE 1, 2 REC OUT	150 mV
TAPE 1 REC/PLAY output	30 mV
Channel balance (250 Hz ~ 6300 Hz)	±2.0 dB
Channel separation at 1 kHz	55 dB
Headphones level and output impedance	450 mV/330Ω
Load impedance MAIN or REMOTE	4 ~ 16Ω
MAIN + REMOTE	8 ~ 16Ω

FM TUNER SECTION

Frequency range	88 ~ 108 MHz
Antenna impedance	300Ω (balanced), 75Ω (unbalanced)
Sensitivity (±40 kHz deviation)	1.9μV (IHF; usable)
	20μV (IHF, S/N 60 dB, 75Ω, STEREO)
	1.9μV (S/N 30 dB, 300Ω)
	1.7μV (S/N 26 dB, 300Ω)
	1.5μV (S/N 20 dB, 300Ω)
	1.3μV (S/N 30 dB, 75Ω)
	1.2μV (S/N 26 dB, 75Ω)
	0.9μV (S/N 20 dB, 75Ω)
Total harmonic distortion MONO	0.15%
STEREO	0.3%
S/N (±40 kHz deviation) MONO	58 dB (IHF; 75 dB)
STEREO	55 dB (IHF; 70 dB)
Frequency response	20 Hz ~ 15 kHz ±1.5 dB
Alternate channel selectivity	70 dB
Capture ratio	1.5 dB
Image rejection at 98 MHz	65 dB
IF rejection at 98 MHz	80 dB
Spurious response rejection at 98 MHz	80 dB
AM suppression	55 dB
Stereo separation 1 kHz	45 dB, **10 kHz** 35 dB
Leak carrier 19 kHz	−35 dB, **38 kHz** −45 dB
Limiting point	1.2μV
Bandwidth IF amplifier	250 kHz
FM demodulator	1000 kHz
Channel balance (250 Hz ~ 6300 Hz)	±1.5 dB

Technics

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

TECHNICAL SPECIFICATIONS

Specifications are subject to change without notice for further improvement.

AM TUNER SECTION

Frequency range	525 ~ 1605 kHz
Sensitivity	30μV, 300μV/m
Selectivity	30 dB
Image rejection at 1000 kHz	45 dB
IF rejection at 1000 kHz	40 dB

GENERAL

Power consumption	450 W
Power supply (50 Hz/60 Hz)	110V/120V/220V/240V 220V/240V (For United Kingdom) 240V only (For Australia)
Dimensions (W x H x D) for [XA, XAL]	487 x 147 x 330 mm (19-5/32" x 5-25/32" x 13")
Dimensions (W x H x D) Except for [XA, XAL]	450 x 142 x 330 mm (17-23/32" x 5-19/32" x 13")
Weight for [XA, XAL]	11 kg (24.2 lb.)
Weight , Except for [XA, XAL]	10.5 kg (23.1 lb.)

TECHNISCHE DATEN

Spezifikationen können infolge von Verbesserungen ohne Ankündigung geändert werden.

[DIN 45 500]

VERSTÄRKERTEIL

RMS-Dauertonleistung bei 1 kHz	
beide Kanäle zusammen ausgesteuert	2 x 64 W (4Ω) 2 x 53 W (8Ω)
RMS-Dauertonleistung bei 20 Hz ~ 20 kHz	
beide Kanäle zusammen ausgesteuert	2 x 56 W (4Ω) 2 x 48 W (8Ω)
RMS-Dauertonleistung bei 40 Hz ~ 16 kHz	
beide Kanäle zusammen ausgesteuert	2 x 56 W (4Ω) 2 x 48 W (8Ω)
Leistungsbandbreite	
beide Känale ausgesteuert bei 4Ω, 8Ω,	7 Hz ~ 50 kHz, –3 dB
Harmonische Verzerrungen	
Nennleistung bei 1 kHz	0.1% (4Ω, 8Ω)
Nennleistung bei 20 Hz ~ 20 kHz	0.1% (4Ω, 8Ω)
Nennleistung bei 40 Hz ~ 16 kHz	0.1% (4Ω, 8Ω)
–26 dB Ausgangsleistung bei 1 kHz	0.15% (4Ω)
50 mW Ausgansleistung bei 1 kHz	0.18% (4Ω)
Intermodulationsverzerrung	
Nennleistung bei 250 Hz: 8000 Hz = 4:1, 4Ω	0.1%
Nennleislung bei 60 Hz: 7 kHz = 4:1, 8Ω	0.1%
Dämpfungsfaktor	25 (4Ω), 50 (8Ω)
Eingangsempfindlichkeit & Impedanz	
PHONO	2.5 mV/47 kΩ
AUX, TAPE 2 PLAYBACK	150 mV/33 kΩ
TAPE 1 PLAYBACK, REC/PLAY Eingang	180 mV/39 kΩ
PHONO Maximale Eingangsspannungen (1 kHz RMS)	150 mV
Fremdspannungsabstand	
Nennleistung PHONO	65 dB (IHF, A; 78 dB)
AUX	80 dB (IHF, A; 95 dB)
–26 dB Ausgangsleistung PHONO, AUX	55 dB
50 mW Ausgangsleistung PHONO, AUX	55 dB
Frequenzgang PHONO	RIAA Standardkurve ±0.2 dB
AUX	20 Hz ~ 20 kHz, ±0,5 dB 10 Hz ~ 45 kHz, –1 dB
Klangregler BÄSSE	50 Hz, +10 dB ~ –10 dB
HÖHEN	10 kHz, +10 dB ~ –10 dB
Gehörgerechte Lautstärkekorrektur (Lautstärke bei –30 dB)	50 Hz, +10 dB
Tiefenfilter	100 Hz, –6 dB/oct.
Höhenfilter	7 kHz, –6 dB/oct.
Ausgangsspannungen TAPE 1, 2 REC OUT	150 mV
TAPE 1 REC/PLAY Aufnahme	30 mV
Kanalabweichung (250 Hz ~ 6300 Hz)	±2.0 dB
Kanaltrennung bei 1 kHz	55 dB
Kopfhörerpegel und Ausgangsimpedanz	450 mV/330Ω
Endimpedanz MAIN oder REMOTE	4 ~ 16Ω
MAIN und REMOTE	8 ~ 16Ω

UKW-TUNERTEIL

Empfangsbereich	88 ~ 108 MHz
Antennenanschluss	300Ω (symmetrisch), 75Ω (asymmetrisch)
Empfindlichkeit (±40 kHz Hub)	1.9μV (IHF) 20μV (IHF, 46 dB Fremdspannungsabstand, 75Ω, STEREO) 1.9μV (30 dB Fremdspannungsabstand, 300Ω) 1.7μV (26 dB Fremdspannungsabstand, 300Ω) 1.5μV (20 dB Fremdspannungsabstand, 300Ω) 1.3μV (30 dB Fremdspannungsabstand, 75Ω) 1.2μV (26 dB Fremdspannungsabstand, 75Ω) 0.9μV (20 dB Fremdspannungsabstand, 75Ω)
Harmonische Verzerrung MONO	0.15%
STEREO	0.3%
Fremdspannungsabstand (±40 kHz Hub)	
MONO	58 dB (IHF: 75 dB)
STEREO	55 dB (IHF: 70 dB)
Frequenzgang	20 Hz ~ 15 kHz, ±1.5 dB
Selektivität	70 dB
Gleichwellen-Selektion	1.5 dB
Spiegelselektion bei 98 MHz	65 dB
ZF-Festigkeit bei 98 MHz	80 dB
Unselektivitätsfestigkeit bei 98 MHz	80 dB
AM-Unterdrückung	55 dB
Stereo Übersprechdämpfung 1 kHz	45 dB, **10 kHz** 35 dB
Trägerrest 19 kHz,	–35 dB, **38 kHz** –45 dB
Begrenzung, Einsatzpunkt	1.2 μV
Bandbreite ZF-Verstärker	250 kHz
UKW-Demodulator	1000 kHz
Kanalabweichung (250 Hz ~ 6300 Hz)	±1.5 dB

MW-TUNERTEIL

Empfangsbereich	525 ~ 1605 kHz
Empfindlichkeit	30μV, 300μV/m
Selektivität	30 dB
Spiegelselektion bei 1000 kHz	45 dB
ZF-Festigkeit bei 1000 kHz	40 dB

ALLGEMEINE DATEN

Leistungsaufnahme	450 W
Netzspannung umschaltbar (50 Hz/60 Hz)	110V/120V/220V/240V
Abmessungen (B x H x T)	450 x 142 x 330 mm
Gewicht	10,5 kg

CARACTERISTIQUES TECHNIQUES

Sujet à changement sans préaris.

[DIN 45 500]

SECTION AMPLIFICATEUR

Puissance RMS (continue) de 1 kHz	
pour l'ensemble des canaux excités	2 x 64 W (4Ω) 2 x 53 W (8Ω)
Puissance RMS (continue) de 20 Hz à 20 kHz	
pour l'ensemble des canaux excités	2 x 56 W (4Ω) 2 x 48 W (8Ω)
Puissance RMS (continue) de 40 Hz a 16 kHz	
pour l'ensemble des canaux excités	2 x 56 W (4Ω) 2 x 48 W (8Ω)
Largeur de bande de puissance	
pour l'ensemble des canaux excites 4Ω, 8Ω	7 Hz ~ 50 kHz, –3 dB
Distorsion harmonique totale	
pour la puissance mesurée à 1 kHz	0.1%(4Ω, 8Ω)
pour la puissance mesurée à 20 Hz ~ 20 kHz	0.1%(4Ω, 8Ω)
pour la puissance mesurée à 40 Hz ~ 16 kHz	0.1%(4Ω, 8Ω)
pour une puissance mesurée de –26 dB, 1 kHz	0.15%(4Ω)
pour une puissance mesurée de 50 mW, 1 kHz	0.18% (4Ω)
Distorsion d'intermodulation	
pour la puissance mesurée à 250 Hz: 8 kHz = 4:1, 4	0.1%
pour la puissance mesurée à 60 Hz: 7 kHz = 4:1, 8	0.1%
Facteur d'amortissement	25 (4Ω), 50 (8Ω)
Sensibilité & impédance d'entrée	
PHONO	2.5 mV/47 kΩ
AUX, TAPE 2 PLAYBACK	150 mV/33 kΩ
TAPE 1 PLAYBACK, REC/PLAY entrée	180 mV/39 kΩ
Voltage d'entrée maximum (PHONO, 1 kHz RMS)	150 mV
Signal/bruit	
Pour la puissance nominale PHONO	65 dB (IHF, A: 78 dB)
AUX	80 dB (IHF, A: 95 dB)
Pour une sortie de –26 dB PHONO AUX	55 dB
Pour une sortie de 50 mW PHONO AUX	55 dB
Réponse de fréquence	
PHONO	Courbe standard RIAA ±0.2 dB
AUX	20 Hz ~ 20 kHz, ±0,5 dB 10 Hz ~ 45 kHz, –1 dB

CARACTERISTIQUES TECHNIQUES

Sujet à changement sans préaris.

Réglage de la tonalite		
BASS (graves)		50 Hz, +10 dB ~ −10 dB
TREBLE (aigus)		10 kHz, +10 dB ~ −10 dB
Contrôle d'intensité sonore (volume à −30 dB)		50 Hz, +10 dB
Filter de grave		100 Hz, −6 dB/oct.
Filter d'aigu		7 kHz, −6 dB/oct.
Tension de sortie	**REC OUT**	150 mV
	REC/PLAY (sortie)	30 mV
Equilibrage de canaux (250 Hz ~ 6300 Hz)		±2.0 dB
Ecart canaux à 1 kHz		55 dB
Niveau des ecouteurs et impédance de sortie		450 mV/330Ω
Impédance de charge	**PRINCIPALE ou ELOIGNEE**	4 ~ 16 Ω
	PRINCIPALE + ELOIGNEE	8 ~ 16 Ω

SECTION TUNER FM

Gamme de fréquences		88 ~ 108 MHz
Impédance d'antenne		300Ω (symétrique), 75Ω (asymétrique)
Sensibilité (±40 kHz déviation)		1,9μV (IHF, utilisable)
		20μV (IHF, signal/bruit 46 dB, 75Ω , STEREO)
		1,9μV (Signal/bruit 30 dB, 300Ω)
		1,7μV (Signal/bruit 26 dB, 300Ω)
		1.5μV (Signal/bruit 20 dB, 300Ω)
		1,3μV (Signal/bruit 30 dB, 75Ω)
		1.2μV (Signal/bruit 26 dB, 75Ω)
		0.9μV (Signal/bruit 20 dB, 75Ω)
Distorsion harmonique totale	**MONO**	0.15%
	STEREO	0.3%
Signal/bruit (±40 kHz déviation)	**MONO**	58 dB (IHF: 75 dB)
	STEREO	55 dB (IHF: 70 dB)
Réponse de fréquence		20 Hz ~ 15 kHz, ±1,5 dB
Sélectivite alternée par canal		70 dB
Taux de capture		1,5 dB
Rejet d'image (à 98 MHz)		65 dB
Rejet FI (à 98 MHz)		80 dB
Rejet de réponse parasite (à 98 MHz)		80 dB
Suppression AM		55 dB
Séparation stéréophonique	**1 kHz** 45 dB,	**10 kHz** 35 dB
Courant porteur de dispersion	**19 kHz** −35 dB,	**38 kHz** −45 dB
Point limite		1.2μV
Largeur de bande Amplificateur FI		250 kHz
Démodulateur FM		1000 kHz
Equilibrage de canaux (250 Hz ~ 6300 Hz)		±1.5 dB

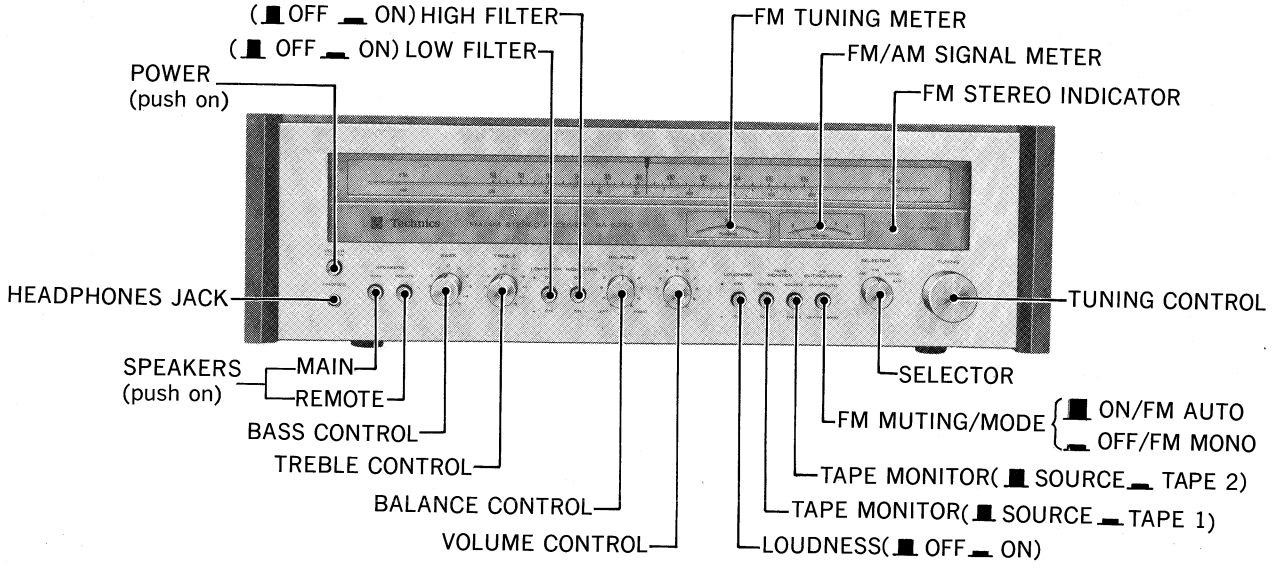
SECTION TUNER AM

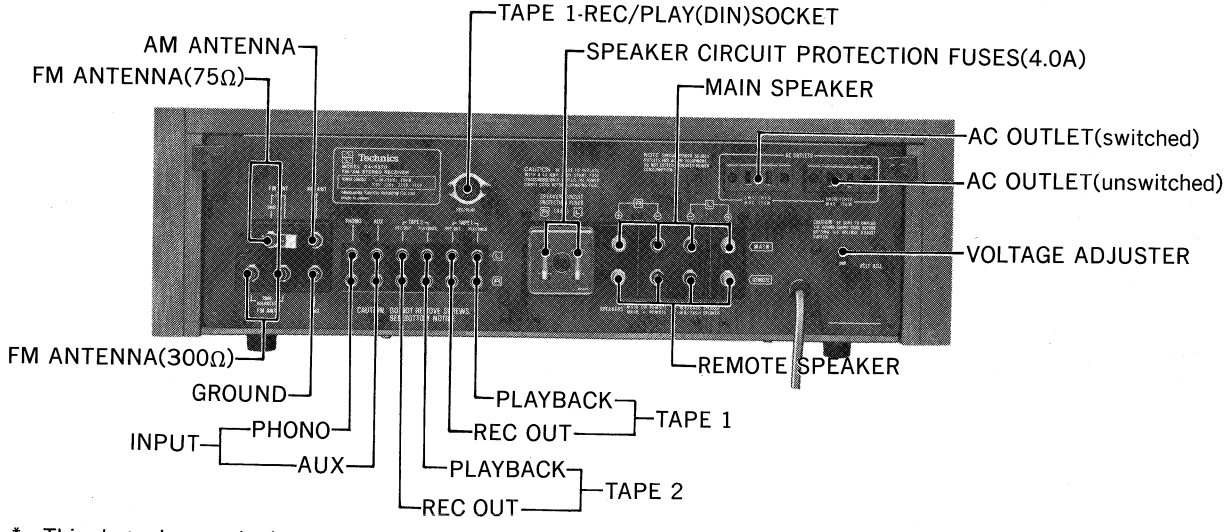
Gammr de fréquence	525 ~ 1605 kHz
Sensibilité	30μV, 300μV/m
Sélectivité	30 dB
Rejet d'image (à 1000 kHz)	45 dB
Rejet FI (à 1000 kHz)	40 dB

GENERALITES

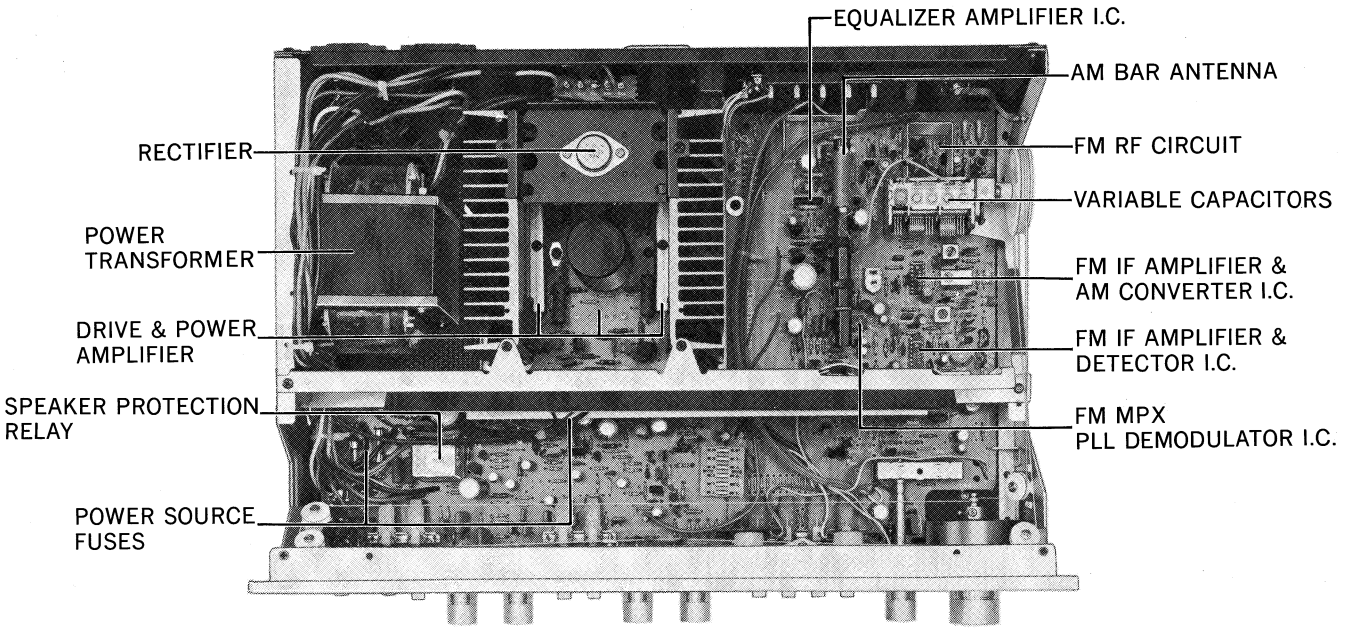
Consommation	450 W
Alimentation (50 Hz/60 Hz)	110V/120V/220V/240V
Dimensions (L x H x Pr)	450 x 142 x 330 mm
Poids	10.5 kg

■ LOCATION OF CONTROLS





* This photo shows only the products for [XA].
* The products for other destinations except [XA] are not equipped with AC outlets.
* For further remark, the products for [XAL] are not provided with voltage adjuster and AC outlets.



■ ALIGNMENT POINTS

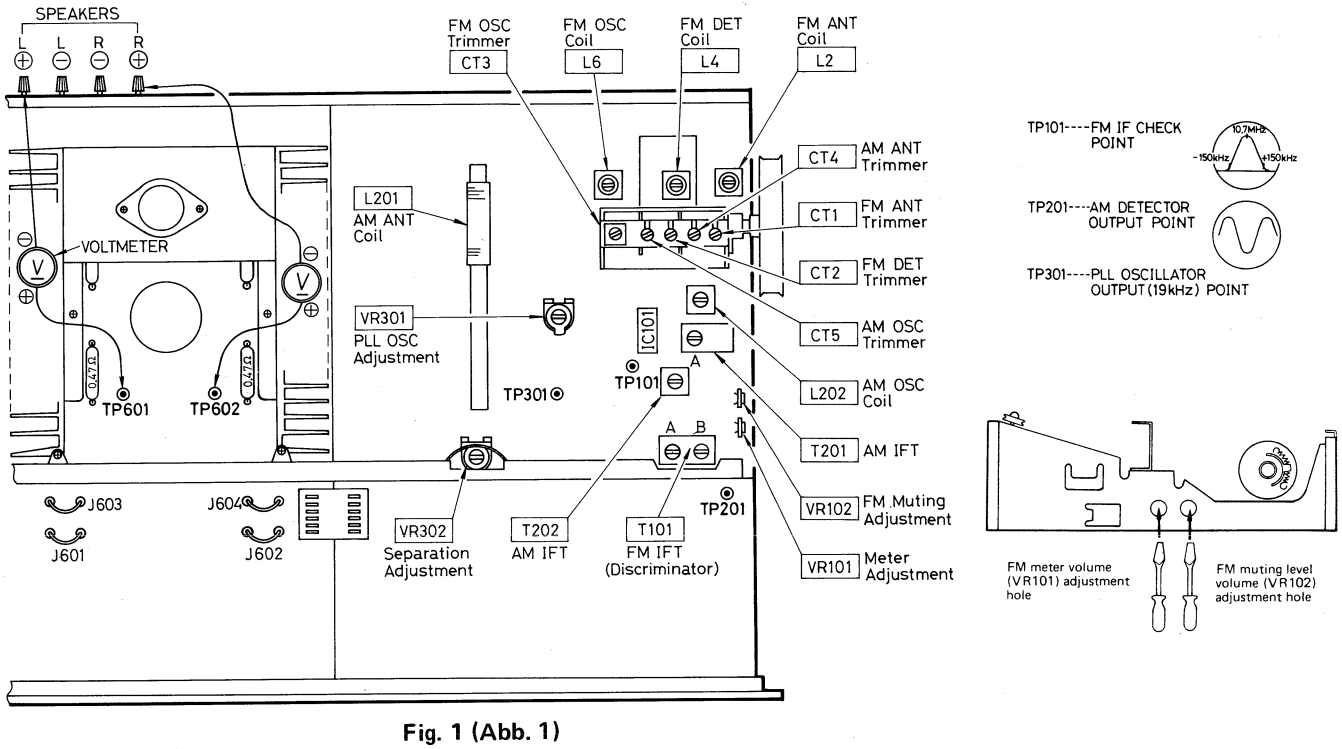
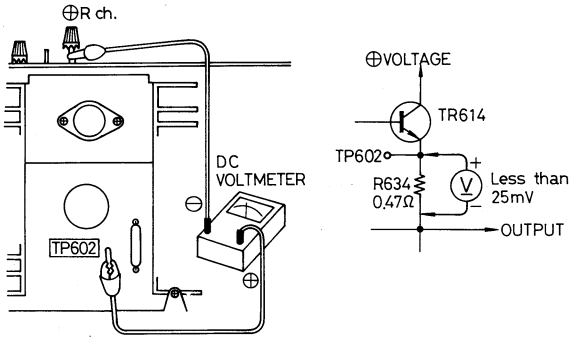
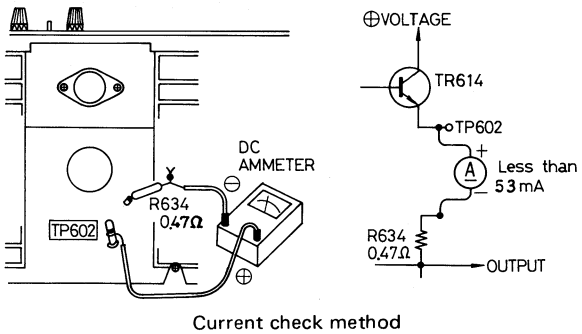


Fig. 1 (Abb. 1)



Voltage check method
(Stromspannung-prüfmethode)
Méthode de vérification
de tension

Fig. 2 (Abb. 2)



Current check method
(Stromstärke-Prüfmethode)
Méthode de vérification
de courant

Fig. 3 (Abb. 3)

■ TO REMOVE CABINET

1. Loosen two (2) metal clamp-mounting screws, nos. ⑤ and ⑥ as shown in fig. 4.
2. Remove four (4) cabinet-mounting screws (① ~ ④), as shown in fig. 5.
3. Remove cabinet from chassis.
4. When installing the front panel, insert the cabinet edge into grove of front panel as shown in fig. 6.

only set for [XA, XAL]

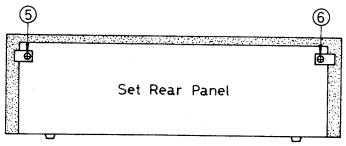


Fig. 4

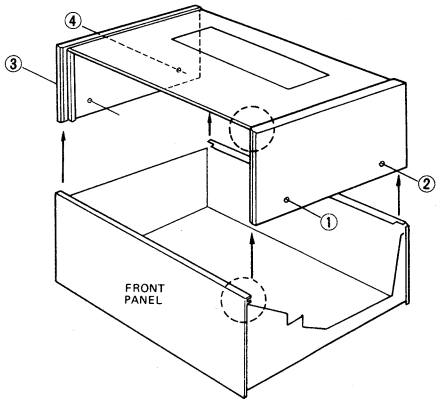


Fig. 5

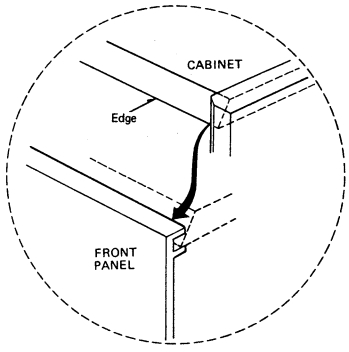


Fig. 6

■ TO REMOVE BOTTOM BOARD

1. Remove eight (8) bottom board-mounting screws (① ~⑧), as shown in fig. 7.
2. When the bottom board is to be removed for repair, never remove any screws other than set screws for the bottom board. Energization of the unit with screws other than the bottom board set screws removed may result in troubles in the circuit.

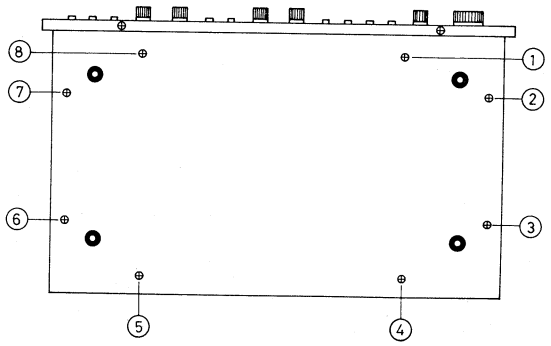


Fig. 7

■ ALIGNMENT INSTRUCTIONS... MAIN AMPLIFIER CIRCUIT

- When the power transistor is replaced, be sure to apply silicone compound (or equivalent thermal diffusion agent) onto the mica plate, and at the same time confirm the idling current of the power transistor. (measure voltage across the emitter resistance)

Ⓐ For adjustment with DC voltmeter

1. Turn the speaker switch "OFF".
2. Connect the DC voltmeter as shown in "Alignment Points". (Fig. 1)
3. If the reading is under 25mV approximately several minutes after turning ON the power supply, the circuit is "OK". On the other hand, if the reading is over 25mV, cut off the lead wire for **J601** and **J603** in the case of left channel (the lead wire for **J602** and **J604** in the case of right channel).
4. Should the reading not fall under 25mV even when the lead wire has been cut off, there is something wrong with the circuit, and therefore, check the power source circuit or main amplifier circuit.

NOTE: When cutting off the lead wire, cut off the same at the root.

Ⓑ Current should be checked only when adjustment is made with a tester. (measuring instrument incapable of measuring voltage in mV unit.)

1. Turn OFF the power supply for the set.
2. Connect the ammeter as shown in Fig. 3. (Case of right channel)
3. After ensuring that the ammeter will not come off, turn ON the power supply.
4. If the reading is under 53mA after several minutes (But, when nothing resistance of internal resistor by ammeter) the circuit is "OK". If over 53mA, cut off the lead wire for **J601** and **J603** in the case of left channel (The lead wire for **J602** and **J604** in the case of right channel).
5. If the reading does not fall under 53mA, there is something wrong with the circuit.

NOTE: The adjustment may be made either by Ⓐ or by Ⓑ method. (We recommend the method Ⓐ where possible). Figs. 2 and 3 are related to the case of right channel.

■ ALIGNMENT INSTRUCTIONS... FM AND AM TUNER CIRCUIT

Note: For adjustment, proceed with the bottom board attached as it is.

Notes:
1. Selector switch ..... {AM (AM Alignment) / FM (FM Alignment)
2. FM Muting/mode switch ..... on/FM auto
3. Maintain line voltage at rated voltage.
4. Tape monitor switch ..... Source
5. Speakers switch ..... MAIN and REMOTE to ON
6. Volume control ..... Variable
7. Output of signal generator should be no higher than necessary to obtain an output reading.
8. 300Ω FM dummy antenna ..... Refer to fig. 8.

	AM/FM SIGNAL GENERATOR		DIAL SETTING	INDICATOR (VTVM or SCOPE) (DISTORTION METER)	ADJUSTMENT POINTS	REMARKS
	CONNECTION	FREQUENCY				
	AM ALIGNMENT					
1	AM signal generator high side through 0.001μF to AM antenna trimmer terminal.	455kHz (30% Mod. with 400Hz) [Set for England to 470kHz]	Point of non-inter-ference	Connect VTVM or scope to speaker terminal(L or R) or TP201 of set.	T201 (1st IFT) T202 (2nd IFT)	Adjust for maximum output.
2	Fashion loop of several turns of wire and radiate signal into loop of receiver.	600kHz (30% Mod. with 400Hz)	600kHz	Connect VTVM or scope to speaker terminal(L or R) or TP201 of set.	L202 (OSC Coil) L201 (ANT Coil)	Adjust for maximum output. Adjust L201 by moving coil bobbin along ferrite core.
3	Fashion loop of several turns of wire and radiate signal into loop of receiver.	1500kHz (30% Mod. with 400Hz)	1500kHz	Connect VTVM or scope to speaker terminal (L or R) or TP201 of set.	CT5 (OSC Trimmer) CT4 (ANT Trimmer)	Adjust for maximum output. Repeat steps (2) and (3)
	FM IF ALIGNMENT					
4		No signal	Point of non-inter-ference	FM Tuning meter of set	T101 (Discri IFT) Primary [A]	Adjust for center of tuning meter indi-cation.
	FM RF ALIGNMENT					
5	Connect FM signal gene-rator to 300Ω FM antenna terminals through FM dummy antenna.	90MHz (100% Mod. with 400Hz)	90MHz	Connect VTVM or scope to speaker terminal(L or R) or TP101 of set.	L6 (OSC Coil) L4 (DET Coil) L2 (ANT Coil)	Adjust for maximum output.
6	Connect FM signal gene-rator to 300Ω FM antenna terminals through FM dummy antenna.	106MHz (100% Mod. with 400Hz)	106MHz	Connect VTVM or scope to speaker terminal(L or R) or TP101 of set.	CT3 (OSC Trimmer) CT2 (DET Trimmer) CT1 (ANT Trimmer)	Adjust for maximum output. Repeat steps (5) and (6).
	FM MONO DISTORTION ALIGNMENT					
7	Connect FM signal gene-rator to 300Ω FM antenna terminals through FM dummy antenna.	100MHz (100% Mod. with 400Hz)	100MHz	Connect distortion meter to left channel speaker terminal of set.	T101 (Discri IFT) Secondary [B]	Tuning at 100MHz and adjust for mini-mum distortion. Repeat steps (4) and (7).
	FM SIGNAL METER ALIGNMENT					
8	Connect FM signal gene-rator to 300Ω FM antenna terminals through FM dummy antenna. Apply about 100dB (100mV)	100MHz (100% Mod. with 400Hz)	100MHz	Signal meter of set.	VR101	FM Muting/Mode switch to "off/FM mono" Adjust VR101 to about "4.7" on signal meter scale.
	FM MUTING LEVEL ALIGNMENT					
9	Connect FM signal gene-rator to 300Ω FM antenna terminals through FM dummy antenna. Apply 16dB (6.3μV) to set. SG indication are 28dB(IHF)	100MHz (100% Mod. with 400Hz)	100MHz	Connect VTVM or scope to speaker (L or R) terminal of set.	VR102	FM Munting/Mode switch to "on/FM auto". Adjust so that output can be obtained.

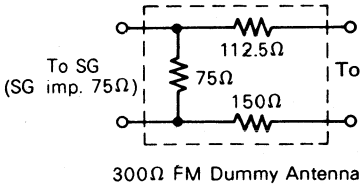
FM MPX PILOT ALIGNMENT

	Using a frequency counter	Using alternate system
10	1. 98MHz Non-modulated mono signal applied to set. 2. FM Muting/Mode switch to "on/FM auto". 3. Connect frequency counter to **TP301** through resistor (100kΩ). 4 Adjust **VR301** to 19kHz ±30Hz.	1. Apply stereo signal from generator or stereo station to receiver. 2. Adjust **VR301** until stereo indicator lights up. Cement arm of **VR301** as shown in fig. 9.

STEREO SEPARATION ALIGNMENT

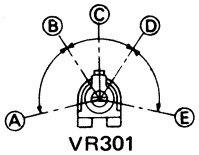
Notes:
1. Stereo modulator ..... • Connect stereo modulator output to EXT. MOD. terminal of signal generator. • Internal OSC ..... 1kHz • Pilot signal modulation 10%
2. FM signal generator ..... • Frequency approximately 98MHz. • Output level to 72dB (IHF) • Modulation mode to FM
3. Band selector switch ..... FM
4. FM Muting/mode switch ..... on/FM auto

	FM SIGNAL GENERATOR CONNECTION	STEREO MODULATOR MODE AND MOD. RATE	INDICATOR (VTVM or SCOPE)	ADJUSTMENT POINT	REMARK
11	300Ω FM antenna terminals through FM dummy antenna	**L** (and R) 30% Modulation	Connect VTVM or scope to output terminals through low pass filter. Refer to fig. 10.	VR302	Adjust for minimum **right** (and left) output



300Ω FM Dummy Antenna

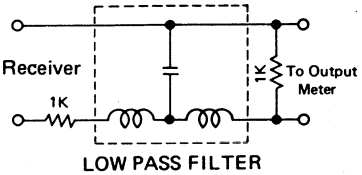
Fig. 8 (Abb. 8)



VR301

A – B, D – E: Stereo OFF Position.
B – D: Stereo ON Position (Indicator Lighting).
C: Adjust Point of Pilot Circuit.

Fig. 9 (Abb. 9)



LOW PASS FILTER
(fc = 15kHz ~19kHz)

Fig. 10 (Abb. 10)

■ ABGLEICHANWEISUNGEN (Verstärkerteil)

- Wenn der Netztransistor ersetzt wird, ist zu beacheten, daß eine Siliziumverbindung (oder ähnliches Termodiffusions-mittel) auf die Glimmerplatte gegeben wird, und zur gleichen Zeit der Blindstrom des Netztransistors festgestellt wird. (Die Spannung über den Emitterwiderstand messen.)

Ⓐ **Zum Justieren mit dem Gleichstrom-Voltmeter**

1. Drehen Sie den Lautsprecherschalter auf "OFF".
2. Schließen Sie den Gleichstrom-Voltmeter an, wie in Abb. 1 des Justrerpunkte-Diagramms gezeigt.
3. Falls die Anzeige weniger als ca. 25mV beträgt, so ist die Schaltung in Ordnung. Falls aber die Anzeige mehr als 25mV beträgt, sehneiden Sie den Leitungsdraht für **J601** und **J603** im Palle des linken Kanals weg (oder den Leitungsdraht für **J602** und **J604** im Falle des rechten Kanals).
4. Falls die Anzeige auch nach Unterbrechen des Leitungsdrahtes nicht unter 25mV fällt, so ist de Schaltung nicht in Ordnung, und die Stromquellenschaltung und die Hauptverstärkerschaltung müssen überprüft werden.

ANMERKUNG: Falls das Wegschneiden des Leitungsdrahtes nötig ist, schneiden Sie diesen nahe am Anschlußpunkt weg.

Ⓑ **Die Stromstärke sollte nur geprüft werden, wenn die Justierung mit einem Prüfgerät vorgenommen wird. (Mit dem Meßinstrument kann die Spannung nicht in mV gemessen werden.)**

1. Schalten Sie die Stromzufuhr zum Gerät aus.
2. Schließen Sie das Ammeter an, wie in Abb. 3 gezeigt.
3. Nachdom Sie sich vergewissert haben, daß das Ammeter solide befestigt ist, schalten Sie die Stromzufuhr ein.
4. Falls die Anzeige einige Minuten nach dem Einschalten weniger als 53mA beträgt, so ist die Schaltung in Ordnung. Liegt die Anzeige über 53mA, schneiden Sie den Leitungsdraht für **J601** und **J603** im Falle des linken Kanals weg. (oder den Leitungsdraht für **J602** und **J604** im Falle des rechten Kanals).
5. Falls die Anzeige auch dann nicht unter 53mA fällt, so ist die Schaltung defekt.

ANMERKUNG: Die Justierung kann entweder nach Methode Ⓐ oder Ⓑ vorgenommen werden. (Wo möglich, empfehlen wir Methode Ⓐ. Die Abbildungen 2 und 3 beziehen sich auf den linken kanal.

■ INSTRUCTIONS D'ALIGNMENT (Partie amplificateur)

- Lorsque le transistor de puissance est remplacé, s'assurer d'appliquer le composé de silicone (ou un agent de diffusion thermique équivalent) sur la plaque de mica et confirmer en même temps le courant déwatté du transistor de puissance. (Mesurer al tension à travers la résistance de l'émetteur).

Ⓐ **Pour la mise au point avec un voltmètre C.C.**

1. Tourner le commutateur de haut-parleur sur "OFF".
2. Connecter le voltmètre C.C. comme dans la Fig. 1 du schéma des endroits de vérification.
3. Si la lecture est approximativement inférieure à 25mV plusieurs minutes après la mise en marche de l'alimentation, le circuit fonctionne correctement. Par contre, si la lecture est au-delà de 25mV, couper le fil de jonction pour **J601** et **J603** dans le cas du canal Gauche [L], (le fil de jonction pour **J602** et **J604**, dans le cas du canal Droite [R].
4. Si la lecture ne descends pas au-dessous de 25mV même lorsque le fil de jonction a été coupé, cela signifie qu il y a quelque chose d'incorrect dans le circuit et par conséquent, il sera nécessaire de vérifier le circuit d'alimentation ou le circuit d'amplification principal.

REMARQUE: Lorsqu'on coupe le fil de jonction, le couper à l'extrémité de sa racine.

Ⓑ **Le courant ne devra être vérifié seulement que lorsque la mise au point est faite avec un appareil contrôleur. (Appareil de mesure incapable d'une tension de mesure dans un appareillage de mV).**

1. Couper l'alimentation de l'appareillage.
2. Brancher l'ampèremètre, comme il est montré à la Fig. 3.
3. Après s'être assuré que l'ampèremètre n'est pas débranché, mettre en marche l'alimentation.
4. Si la lecture est inférieure à 53mA après plusieurs minutes, le circuit fonctionne correctement. Si par contre la lecture va au-delà de 53mA, couper le fil de jonction pour **J601** et **J603** dans le cas du canal Gauche [L], (le fil de jonction pour **J602** et **J604**, dans le cas du canal Droite [R]).
5. Si la lecture ne descends pas au-dessous de 53mA, cela signifie qu'il y a quelque chose de défectueux dans le circuit.

REMARQUE: La mise au point doit être faite soit avec la méthode Ⓐ, soit avec la méthode Ⓑ. (Si c'est possible, nous recommandons la méthode Ⓐ. Les Figures 2 et 3 se rapportent au cas du canal Gauche [L].

■ ABGLEICHANWEISUNGEN (FM/AM Tunerteil) (Für Deutshland)

Anmerkungen:
1. Bereichsschalter ..... AM (AM Abgleich) / FM (FM Abgleich)
2. FM Muting/ mode-Schalter ..... on/ FM auto
3. Die Netzspannung auf ihren Sollwert einstellen.
4. Tape/ Monitor-Umschalter ..... SOURCE
5. Der Ausgang des Meßsenders darf nicht höher sein als unbedingt notwendig für eine gute Ablesung.
6. UKW-Kunstantenne, 300 ohm .....Vgl. Abb. 8.
7. Lautsprecher-Schalter ..... ON

	AM/UKW MESSENDER order WOBBELGENERATOR		SKALENZEIGEREINSTELLUNG DES TUNER	ANZEIGE (Röhrenvoltmeter order Oszillograph ozw. Klirrfaktor-Meßgerät)	ABGLEICHSPUNKTE	BEMERKUNGEN
	ANSCHLUSS	FREQUENZ				
	AM-ABGLEICH					
1	Heißes Ende des Meßsender über einen 0.001μF Kondensator un den AM Antenneneingang schließen. Kaltes Ende an Masse	455kHz (400Hz Modulat., 100%)	Kein Empfang	Röhrenvoltmeter oder Oszillograph	T201 (1. IFT) T202 (2. IFT)	Auf max. Ausgang abgleichen.
2	Das Meßsendersignal induktiv in den Tuner speisen. Hierzu behelfsmäßig eine Rahmenantenne fertigen und an den Eingang schließen.	600kHz (400Hz Modulat., 30%)	600kHz	Röhrenvoltmeter order Oszillograph über den Lautsprecher schließen.	L202 (Osc. Spule) L201 (Ant. Spule)	Auf max. Ausgang abgleichen. L201 wird abgeglichen, indem die Spule am Ferritstab. entlanggeschoben wird.
3	Das Meßsendersignal induktiv in den Tuner speisen. Hierzu behelfsmäßig eine Rahmenantenne fertigen und an den Eingang schließen.	1500kHz (400Hz Modulat., 30%)	1500kHz	Röhrenvoltmeter oder Oszillograph über den Loutsprecher schließen.	CT5 (Osc. Trimmer) CT4 (Ant. Trimmer)	Auf max. Ausgang abgleichen. Schritte (2) und (3) sind zu wiederholen.
	UKW ZF-ABGLEICH					
4		Kein Signal	Kein Empfang	Abstimmanzeige.	T101(Diskriminator IFT) [A]	Den Abstimmungsanzeiger auf den zentrum Wert einstellen.
	UKW HF-ABGLEICH					
5	Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen.	87.5MHz (400Hz Modulat., 100%)	87.5MHz (Frequenz min.)	Röhrenvoltmeter oder Oszillograph über den Lautsprecher schließen.	L6 (Osc. Spule)	Auf max. Ausgang abgleichen.
6	Meßsender üder eine Kunstantenne an den UKW-Antenneneingang schließen.	90MHz (400Hz Modulat., 100%)	90MHz	Röhrenvoltmeter oder Oszillograph über den Lautsprecher schließen.	L4 (Det. Spule) L2 (Ant. Spule)	Auf max. Ausgang abgleichen.
7	Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen.	106MHz (400Hz Modulat., 100%)	106MHz	Röhrenvoltmeter oder Oszillograph über den Lautsprecher schließen.	CT3 (Osc. Trimmer) CT2 (Det. Trimmer) CT1 (Ant. Trimmer)	Auf max. Ausgang abgleichen Schritte(5), (6) und (7) sind zu wiederholen.
	ABGLEICH AUF MIN. VERZERRUNG IN STELLUNG UKW-MONO					
8	Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen.	100MHz (400Hz Modulat., 100%)	100MHz	Klirrfaktor-Meßbrücke über den Lautsprecher schließen.	T101 (Diskriminator IFT) [B]	Auf min. Verzerrung auf der Klirrfaktor-Meßbürcke abgleichen Schritt (4) und (8) sind zu wiederholen.
	UKW-FELDSTÄRKEANZEIGE-ABGLEICH					
9	Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen. Meßsender für 100dB (IHF) (ca. 100mV) einstellen.	100MHz (400Hz Modulat., 30%)	100MHz	Feldstärkenanzeige	VR101	FM Muting-Schalter auf "on/ FM auto" VR101 auf ca. 4,7 der Feldstärkeanzeige einstellen.
	UKW-MUTING-ABGLEICH					
10	Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen. Meßsender auf 16 dB (6.3μV) einstellen.	100 MHz (400 Hz Modulat., 100%)	100 MHz	Röhrenvoltmeter oder Oszillograph über den Lautsprecher schließen.	VR102	FM Muting-Schalter auf "off/ FM mono" So einstellen, daß ein Ausgang zu vernehmen ist.
	UKW-STEREO-DEKODER-ABGLEICH					
11	Unter Verwendung eines Zählers 1. Unmoduliertes Mono-Signal 100 MHz in das Gerät speisen. 2. FM Muting-Schalter auf "on/ FM auto" stellen. 3. Zähler über einen Widerstand 100K ohm an **TP301** schließen. 4. **VR301** auf 19kHz ±30Hz einstellen.			Alternativ-Meßmethode 1 Stereosignal entweder von einem Stereogenerator oder einem Sender einspeisen. 2. **VR301** so einstellen, bis die Stereolampe auf leuchtet. Schleifer von **VR301** sichern, wie in Abb. 9 gezeigt.		
	KANALTRENNUNG-ABGLEICH					

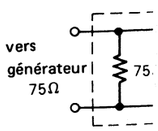
Anmerkungen:
1. Stereo-Modulator ..... Ansgang des Stereo-Modulators an den Eingang EXT MOD des Meßsenders schließen. Eingebauter Oszillator ..... 1kHz / Pilotton-Modulation 10%
2. UKW Meßsender ..... Auf etwa 100MHz einstellen. Ausgangspegel 72dB (IHF). Modulation FM
3. Bereichsschalter ..... FM
4. Muting/ Mode-Schalter ..... on/FM auto

	ANSCHLUSS DES UKW MESSENDERS	STEREO MODULATOR MODE oder MOD. RATE	ANZEIGE (Röhrenvoltmeter oder Oszillograph)	ABGLEICHSPUNKTE	ANMERKUNGEN
12	Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen.	**L**(und R) Modulation 30%	Röhrenvoltmeter oder Oszillograph über Tiefpassfilter an den Tuner-Ausgang schließen. Vgl. Abb.10.	VR302	Auf min. Ausgang **rechter** (und linker) abgleichen.

■ INSTRU

Notes:
1. Commuta
2. Commuta
3. Conserver

	AM
	BRANC
1	Côté chaud, à t sur le trimme AM, commun
2	Faire une bou quelgues tour le signal dans l'ampli-tuner.
3	Faire une bou quelgues tour le signal dans l'ampli-tuner.
4	
5	Branchez sur d'antenne FM une antenne f
6	Branchez sur d'antenne FM une antenne f
7	Branchez sur d'antenne FM une antenne f
8	Branchez sur d'antenne FM une antenne f Niveau de sor générateur 10
9	Branchez sur d'antenne FM antenne fictiv Niveau de sort générateur 16
10	1. Signal mo 2. Commutat 3. Branchez l résistance 4. Réglez **VR**
	Notes: 1. 2. 3.
	BRANCHEM GENERATEU
11	Borne d'anter travers antenr



Antenne fic

Fig

■ ABGLEICHANWEISUNGEN (FM/AM Tunerteil)

(Für Deutshland)

Anmerkungen:
1. Bereichsschalter . . . . . | AM (AM Abgleich) / FM (FM Abgleich)
2. FM Muting/ mode-Schalter . . . . . on/ FM auto
3. Die Netzspannung auf ihren Sollwert einstellen.
4. Tape/ Monitor-Umschalter . . . . . SOURCE
5. Der Ausgang des Meßsenders darf nicht höher sein als unbedingt notwendig für eine gute Ablesung.
6. UKW-Kunstantenne, 300 ohm . . . . . .Vgl. Abb. 8.
7. Lautsprecher-Schalter . . . . . ON

	AM/UKW MESSENDER order WOBBELGENERATOR		SKALENZEIGEREINSTELLUNG DES TUNER	ANZEIGE (Röhrenvoltmeter order Oszillograph ozw. Klirrfaktor-Meßgerät)	ABGLEICHSPUNKTE	BEMERKUNGEN
	ANSCHLUSS	FREQUENZ				
	AM-ABGLEICH					
1	Heißes Ende des Meßsender über einen 0.001μF Kondensator un den AM Antenneneingang schließen. Kaltes Ende an Masse	455kHz (400Hz Modulat., 100%)	Kein Empfang	Röhrenvoltmeter oder Oszillograph	T201 (1. IFT) T202 (2. IFT)	Auf max. Ausgang abgleichen.
2	Das Meßsendersignal induktiv in den Tuner speisen. Hierzu behelfsmäßig eine Rahmenantenne fertigen und an den Eingang schließen.	600kHz (400Hz Modulat., 30%)	600kHz	Röhrenvoltmeter order Oszillograph über den Lautsprecher schließen.	L202 (Osc. Spule) L201 (Ant. Spule)	Auf max. Ausgang abgleichen. L201 wird abgeglichen, indem die Spule am Ferritstab. entlanggeschoben wird.
3	Das Meßsendersignal induktiv in den Tuner speisen. Hierzu behelfsmäßig eine Rahmenantenne fertigen und an den Eingang schließen.	1500kHz (400Hz Modulat., 30%)	1500kHz	Röhrenvoltmeter oder Oszillograph über den Loutsprecher schließen.	CT5 (Osc. Trimmer) CT4 (Ant. Trimmer)	Auf max. Ausgang abgleichen. Schritte (2) und (3) sind zu wiederholen.
	UKW ZF-ABGLEICH					
4		Kein Signal	Kein Empfang	Abstimmanzeige.	T101 (Diskriminator IFT) [A]	Den Abstimmungsanzeiger auf den zentrum Wert einstellen.
	UKW HF-ABGLEICH					
5	Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen.	87.5MHz (400Hz Modulat., 100%)	87.5MHz (Frequenz min.)	Röhrenvoltmeter oder Oszillograph über den Lautsprecher schließen.	L6 (Osc. Spule)	Auf max. Ausgang abgleichen.
6	Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen.	90MHz (400Hz Modulat., 100%)	90MHz	Röhrenvoltmeter oder Oszillograph über den Lautsprecher schließen.	L4 (Det. Spule) L2 (Ant. Spule)	Auf max. Ausgang abgleichen.
7	Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen.	106MHz (400Hz Modulat., 100%)	106MHz	Röhrenvoltmeter oder Oszillograph über den Lautsprecher schließen.	CT3 (Osc. Trimmer) CT2 (Det. Trimmer) CT1 (Ant. Trimmer)	Auf max. Ausgang abgleichen Schritte(5), (6) und (7) sind zu wiederholen.
	ABGLEICH AUF MIN. VERZERRUNG IN STELLUNG UKW-MONO					
8	Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen.	100MHz (400Hz Modulat., 100%)	100MHz	Klirrfaktor-Meßbrücke über den Lautsprecher schließen.	T101 (Diskriminator IFT) [B]	Auf min. Verzerrung auf der Klirrfaktor-Meßbürcke abgleichen Schritt (4) und (8) sind zu wiederholen.
	UKW-FELDSTÄRKEANZEIGE-ABGLEICH					
9	Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen. Meßsender für 100dB (IHF) (ca. 100mV) einstellen.	100MHz (400Hz Modulat., 30%)	100MHz	Feldstärkenanzeige	VR101	FM Muting-Schalter auf "on/ FM auto" VR101 auf ca. 4,7 der Feldstärkeanzeige einstellen.
	UKW-MUTING-ABGLEICH					
10	Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen. Meßsender auf 16 dB (6.3μV) einstellen.	100 MHz (400 Hz Modulat., 100%)	100 MHz	Röhrenvoltmeter oder Oszillograph über den Lautsprecher schließen.	VR102	FM Muting-Schalter auf "off/ FM mono" So einstellen, daß ein Ausgang zu vernehmen ist.

UKW-STEREO-DEKODER-ABGLEICH

	Unter Verwendung eines Zählers	Alternativ-Meßmethode
11	1. Unmoduliertes Mono-Signal 100 MHz in das Gerät speisen. 2. FM Muting-Schalter auf "on/ FM auto" stellen. 3. Zähler über einen Widerstand 100K ohm an **TP301** schließen. 4. **VR301** auf 19kHz ±30Hz einstellen.	1 Stereosignal entweder von einem Stereogenerator oder einem Sender einspeisen. 2. **VR301** so einstellen, bis die Stereolampe auf leuchtet. Schleifer von **VR301** sichern, wie in Abb. 9 gezeigt.

KANALTRENNUNG-ABGLEICH

Anmerkungen:
1. Stereo-Modulator . . . . . Ansgang des Stereo-Modulators an den Eingang EXT MOD des Meßsenders schließen. Eingebauter Oszillator . . . . . 1kHz / Pilotton-Modulation 10%
2. UKW Meßsender . . . . . Auf etwa 100MHz einstellen. Ausgangspegel 72dB (IHF). Modulation FM
3. Bereichsschalter . . . . . FM
4. Muting/ Mode-Schalter. . . . . on/FM auto

	ANSCHLUSS DES UKW MESSENDERS	STEREO MODULATOR MODE oder MOD. RATE	ANZEIGE (Röhrenvoltmeter oder Oszillograph)	ABGLEICHSPUNKTE	ANMERKUNGEN
12	Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen.	**L** (und R) Modulation 30%	Röhrenvoltmeter oder Oszillograph über Tiefpassfilter an den Tuner-Ausgang schließen. Vgl. Abb. 10.	VR302	Auf min. Ausgang **rechter** (und linker) abgleichen.

■ INSTRUCTIONS D'ALIGNEMENT (Partie tuner FM/AM)

Notes:
1. Commutateur de gamme. . . . . | AM (Alignement AM) / FM (Alignement FM)
2. Commutateur de silencieux . . . on/FM auto
3. Conserver la tension du secteur à la tension nominale.
4. Commutateur de contrôle auditif . . . . . SOURCE (relâchée)
5. Le signal de sortie du générateur ne doit pas être plus élevé que nécessaire à la lecture en sortie de làppareil.
6. Antenne fictive FM 300Ω . . . . . .Voir fig. 11.
7. Commutateur d'enceintes . . . . . .ON

	AM/FM GENERATEUR		AIGUILLE SUR LE CADRAN	INDICATEUR (VOLTMETRE ELECTRONIQUE OSCILLOSCOPE OU DISTORSIONMETRE)	POINTS DE REGLAGE	OBSERVATIONS
	BRANCHEMENT	FREQUENCE				
	ALIGNEMENT AM					
1	Côté chaud, à travers 0.001μF, sur le trimmer de l'antenne AM, commum an shâssis	455kHz (modulé à 30% par 400Hz)	Point sans signal	Branchez un voltmètre électronique ou un oscilloscope sur les bornes de hout-parleur de l'ampli-tuner	T201 (1 transfo FI) T202 (2 transfo FI) T203 (3 transfo FI)	Réglez au maximum de signal de sortie.
2	Faire une boucle de quelgues tours et rayonner le signal dans le cadre du l'ampli-tuner.	600kHz (modué à 30% par 400Hz)	600kHz	Branchez un voltmètre électronique ou un oscilloscope sur les bornes de hout-parleur de l'ampli-tuner	L202 (bobine OSC) L201 (bobine ANT)	Réglez au maximum de signal de sortie. Réglez L201 en déplacant la bobine le long du noyau de ferrite.
3	Faire une boucle de quelgues tours et rayonner le signal dans le cadre du l'ampli-tuner.	1500kHz (modulé à 30% par 400Hz)	1500kHz	Branchez un voltmètre électronique ou un oscilloscope sur les bornes de hout-parleur de l'ampli-tuner	CT5 (trimmer OSC) CT4 (trimmer ANT)	Réglez au maximum de signal de sortie. Recommencez les étapes (2) et (3).
	A LIGNEMENT FI–FM					
4		Sans signal	point sans signal	Indicateur d'accord de l'appareil	T101 (Transfo FI discri.) [A]	Réglez pour atteindre position médiane sur l'indicateur d'accord.
	ALIGNEMENT RF–FM					
5	Branchez sur la prise d'antenne FM à travers une antenne fictive FM.	90MHz (modulé à 100% par 400Hz)	90MHz	Branchez un voltmètre électronique ou un oscilloscope sur les bornes de hout-parleur de l'ampli-tuner	L6 (bobine OSC) L4 (bobine DET) L2(bobine ANT)	Réglez au maximum de signal de sortie.
6	Branchez sur la prise d'antenne FM à travers une antenne fictive FM.	106MHz (modulé à 100% par 400Hz)	106MHz	Branchez un voltmètre électronique ou un oscilloscope sur les bornes de hout-parleur de l'ampli-tuner	CT3 (trimmer OSC) CT2 (trimmer DET) CT1 (trimmer ANT)	Réglez au maximum de signal de sortie. Recommencez les étapes (5) et (6).
	REGLAGE DE LA DISTORSION FM EN MONO					
7	Branchez sur la prise d'antenne FM à travers une antenne fictive FM.	100MHz (modulé à 100% par 400Hz)	100MHz	Branchez un distorsiométre sur les bornes de hout-parleur de l'appareil.	T101 (Transfo FI discri.) [B]	Réglez au minimum d'indication du distorsiomètre. Recommencez les étapes (4) et (7).
	REGLAGE DE L'INDICATEUR D'ACCORD FM					
8	Branchez sur la prise d'antenne FM à travers une antenne fictive FM. Niveau de sortie du générateur 100dB(0.1V)	100MHz (modulé à 100% par 400Hz)	100MHz	Indicateur d'intensité	VR101	Commutateur de silencieux sur "off/FM mono Réglez VR101 pour obtenir env. "4.7" points sur l'échelle d'intensité.
	REGLAGE DU SEUIL DU SILENCIEUX D'ACCORD					
9	Branchez sur la prise d'antenne FM à travers une antenne fictive FM. Niveau de sortie du générateur 16 dB (6.3μV).	100 MHz (modulé à (100% par 400Hz)	100 MHz	Branchez un voltmètre électronique ou un oscilloscope sur les bornes de hout-parleur de l'ampli-tuner	VR102	Commutateur de silencieux sur "on/FM auto. Régler pour obtenir une lecture en sortie.

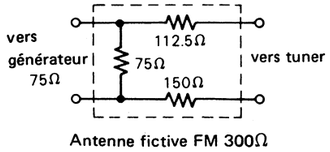
ALIGNEMENT DU PILOTE MULTIPLEX FM

	Avec un fréquencemétre	Par un outre système
10	1. Signal mono 100MHz non modulé appliqué à l'appareil. 2. Commutateur de silencieux sur "on/FM auto". 3. Branchez le fréquencemètre sur **TP301** à travers une résistance de 100kΩ. 4. Réglez **VR301** sur 19kHz ± 30Hz.	1. Appliquez à l'appareil un signal stéréo provenant d'un générateur ou de la réception d'un émetteur. 2. Réglez **VR301** jusqu á ce que l'indicateur de stéréophonic s'allume. Collez le curseur de **VR301** comme indiqué sur la fig.12.

REGLAGE DE LA SEPARATION DES CANAUX

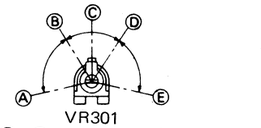
Notes: 1. Modulateur stéréo. . . . . Branchez sa sortie sur la prise EXT. MOD. du générateur.
OSC interne . . . . . 1kHz Modulation du signal pilote 10%
2. Générateur de signal . . . . . Fréquence env. 100MHz, niveau de sortie 72dB (IHF), genre de modulation sur FM.
3. Commutateur de gamme . . . . FM 4. Commutateur de silencieux . . . . .on /FM auto

	BRANCHEMENT DU GENERATEUR DE SIGNAL	MODE DU MODULATEUR STEREO ET TAUX DE MODULATION	INDICATEUR (VOLTMETRE ELECTRONIQUE OU OSCILLOSCOPE)	POINTS DE REGLAGE	OBSERVATIONS
11	Borne d'antenne FM à travers antenne fictive.	**Gauche** (et droite) à 30% de modulation.	Sur les bornes de haut-parleur à travers un filtre passe-bas, voir fig. 13.	VR302	Réglez au minimum de sortie **droite** (et gauche)



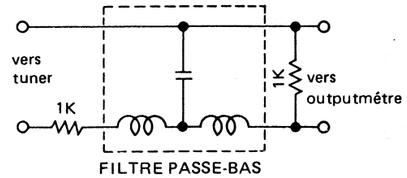
Antenne fictive FM 300Ω

Fig. 11



Ⓐ~Ⓑ Ⓓ~Ⓔ: Position stéréo arrêt
Ⓑ~Ⓓ : Position stéréo en marche (éclairage du voyant indicateur)
Ⓒ : Point de réglage du circuit pilote

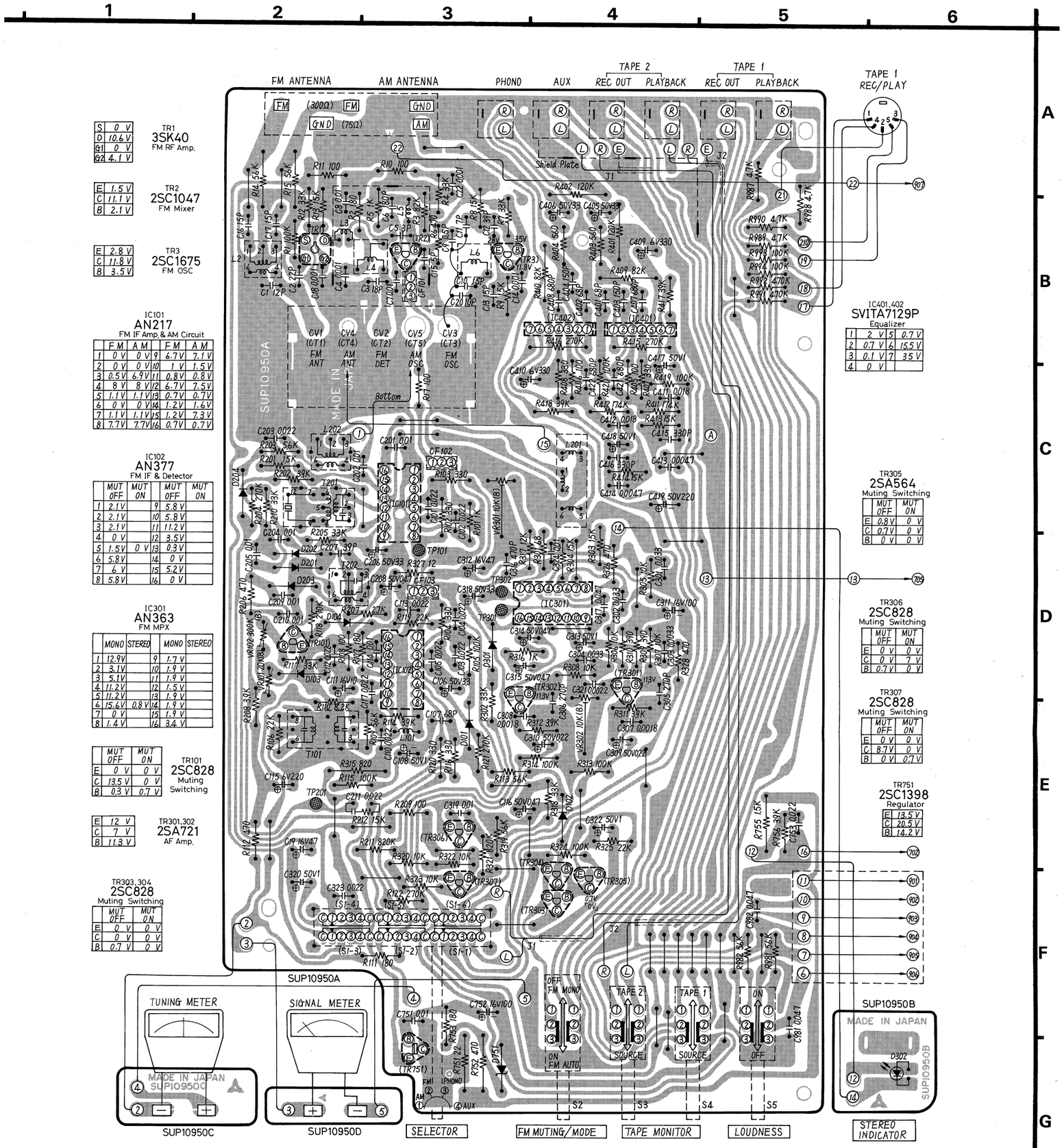
Fig. 12



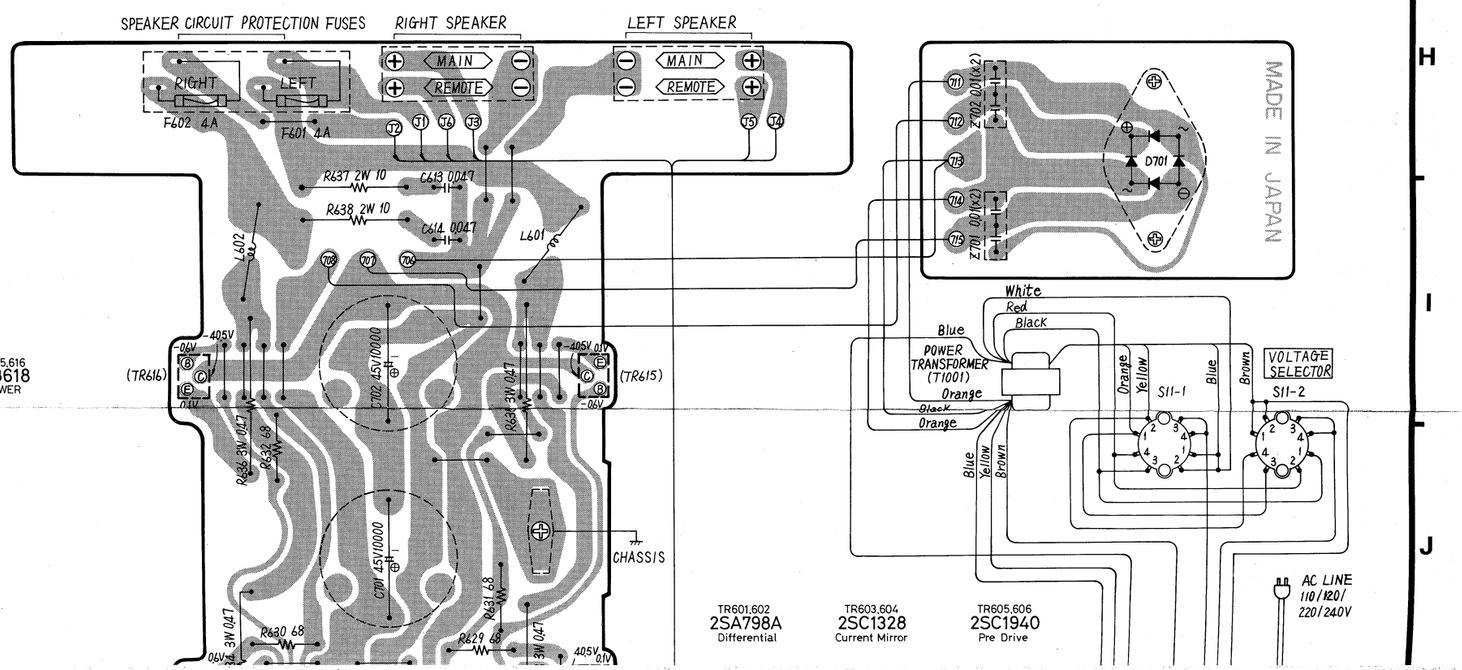
FILTRE PASSE-BAS
(fc = 15 kHz ~ 19 kHz)

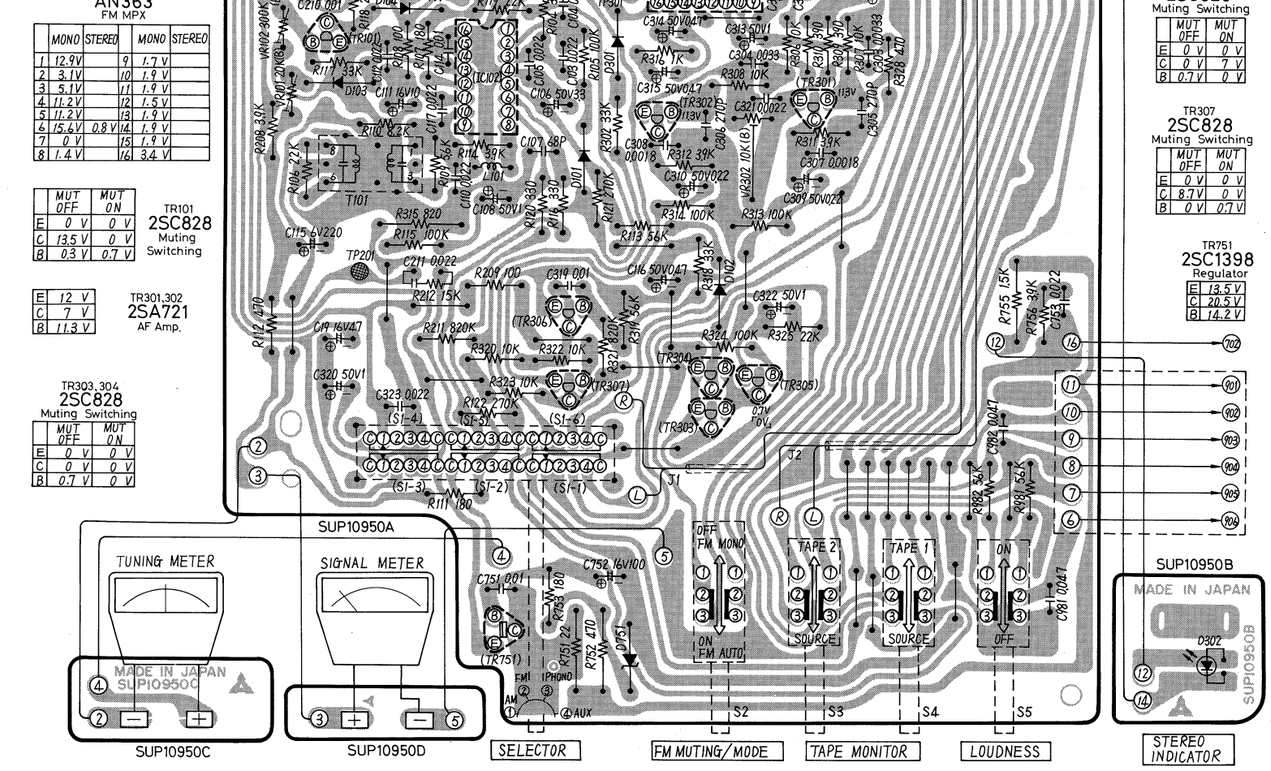
Fig. 13

■ PRINTED CIRCUIT BOARD ..... FM/AM TUNER & EQUALIZER CIRCUIT

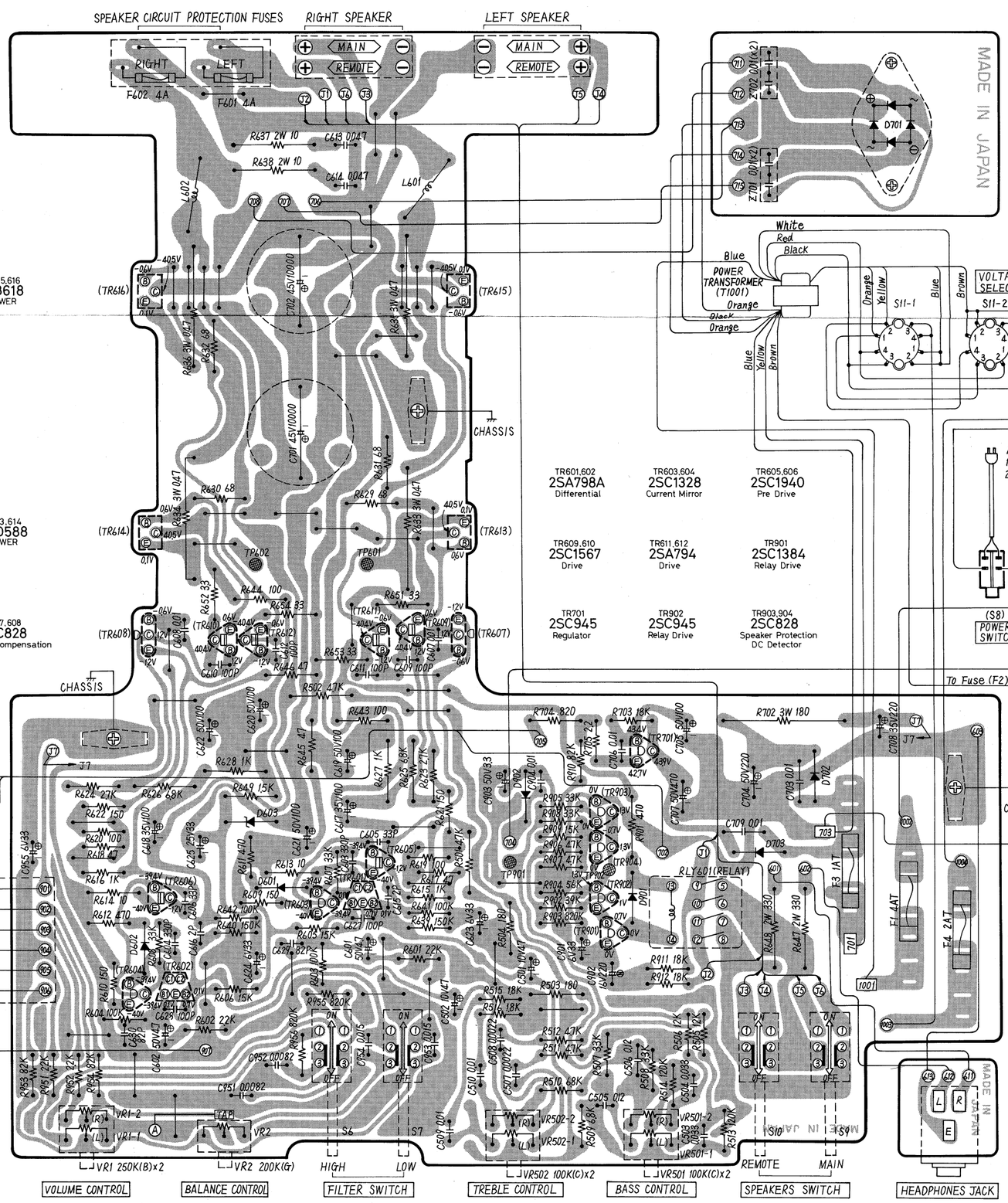


■ PRINTED CIRCUIT BOARD ..... TONE CONTROL, MAIN AMPLIFIER, POWER SUPPLY & PROTECTION CIRCUIT

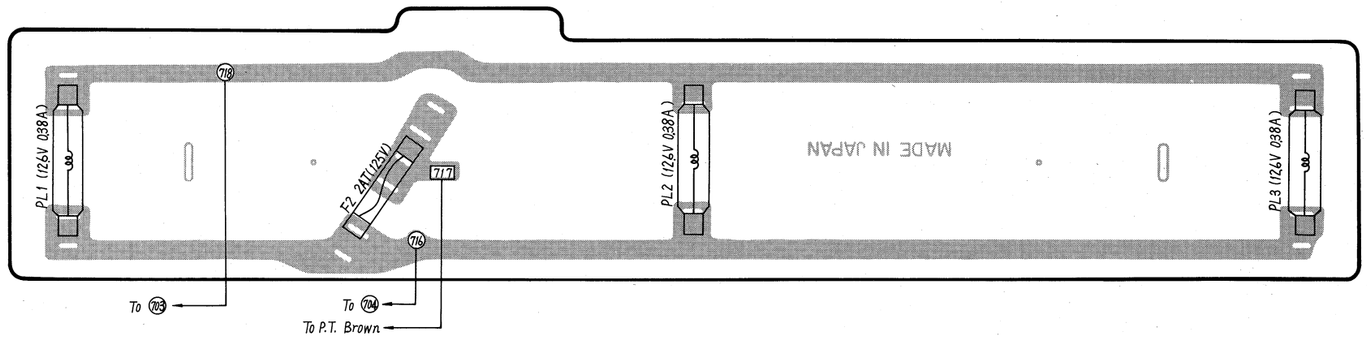




■ PRINTED CIRCUIT BOARD ..... TONE CONTROL, MAIN AMPLIFIER, POWER SUPPLY & PROTECTION CIRCUIT

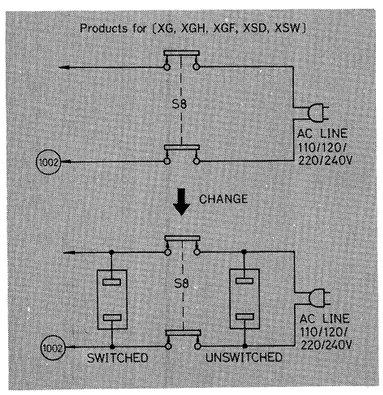


■ DIAL LAMPS & POWER FUSE CIRCUIT BOARD

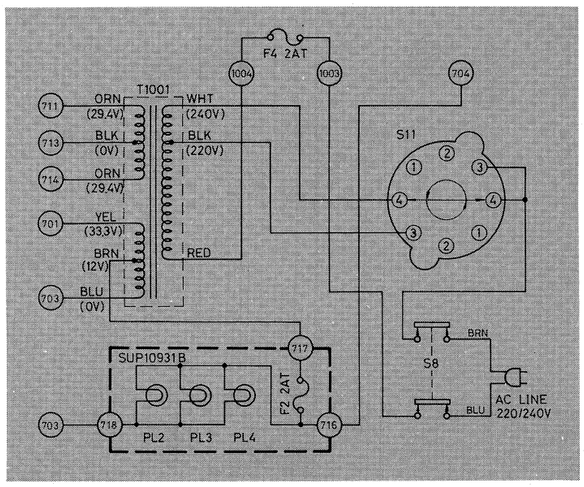


■ POWER SOURCE OF THE PRODUCTS FOR OTHER DESTINATIONS EXCEPT (XG, XGH, XGF, XSD, XSW)

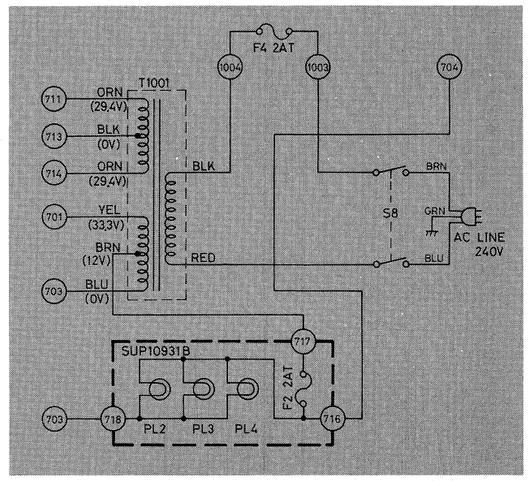
• Product for [XA]



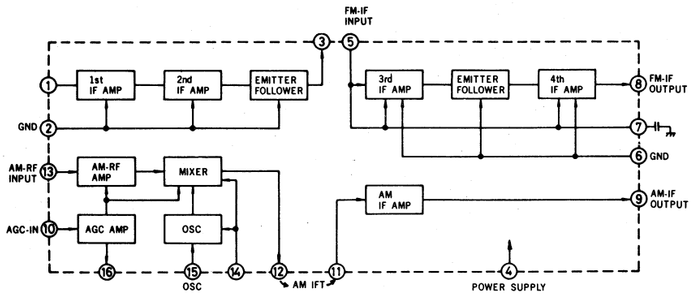
• Product for England [XE]



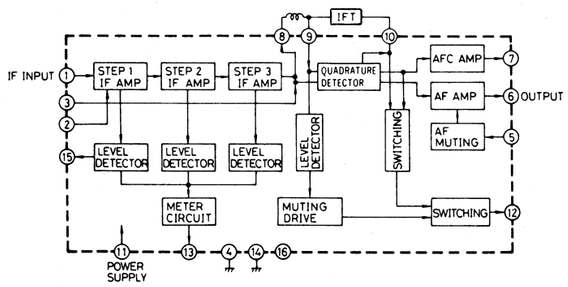
Product for Australia [XAL]



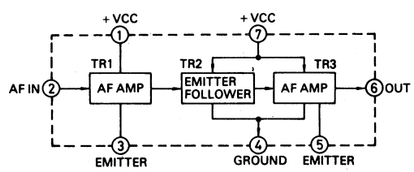
■ BLOCK DIAGRAM OF INTEGRATED CIRCUITS



IC101 (AN217)
FM 2 STEPS IF AMPLIFIER & AM CIRCUIT

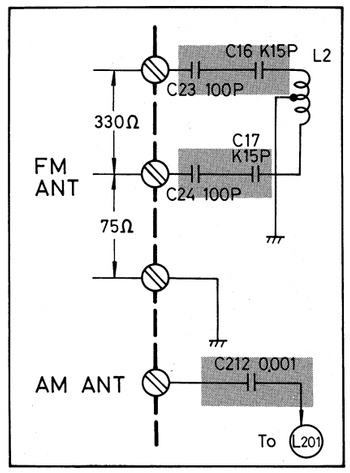


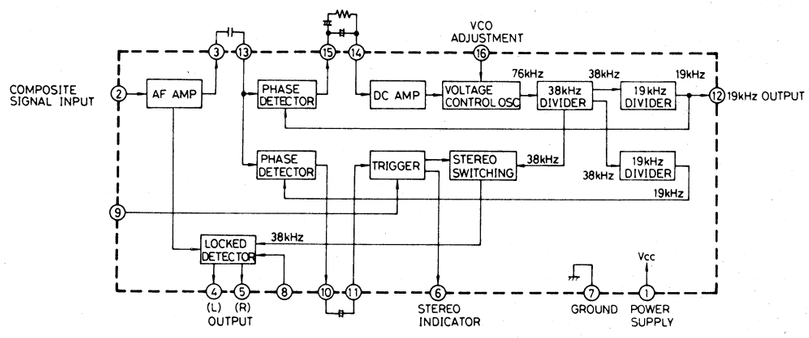
IC102 (AN377)
FM IF AMPLIFIER & DETECTOR CIRCUIT



IC401, 402 (SVITA7129P)
EQUALIZER AMPLIFIER CIRCUIT

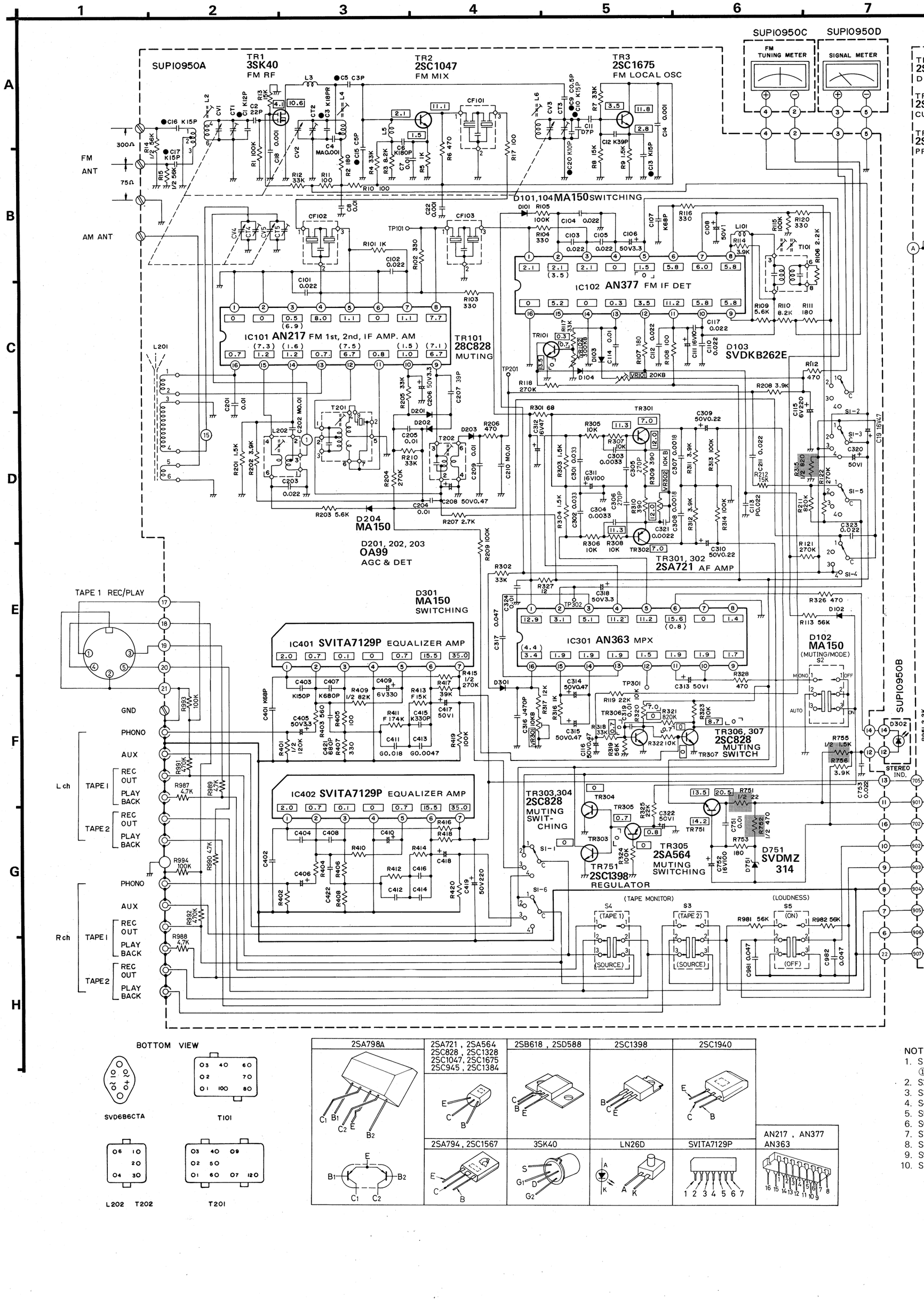
■ ANTENNA CUPPLING CAPACITORS THE PRODUCTS FOR (XAL) ONLY





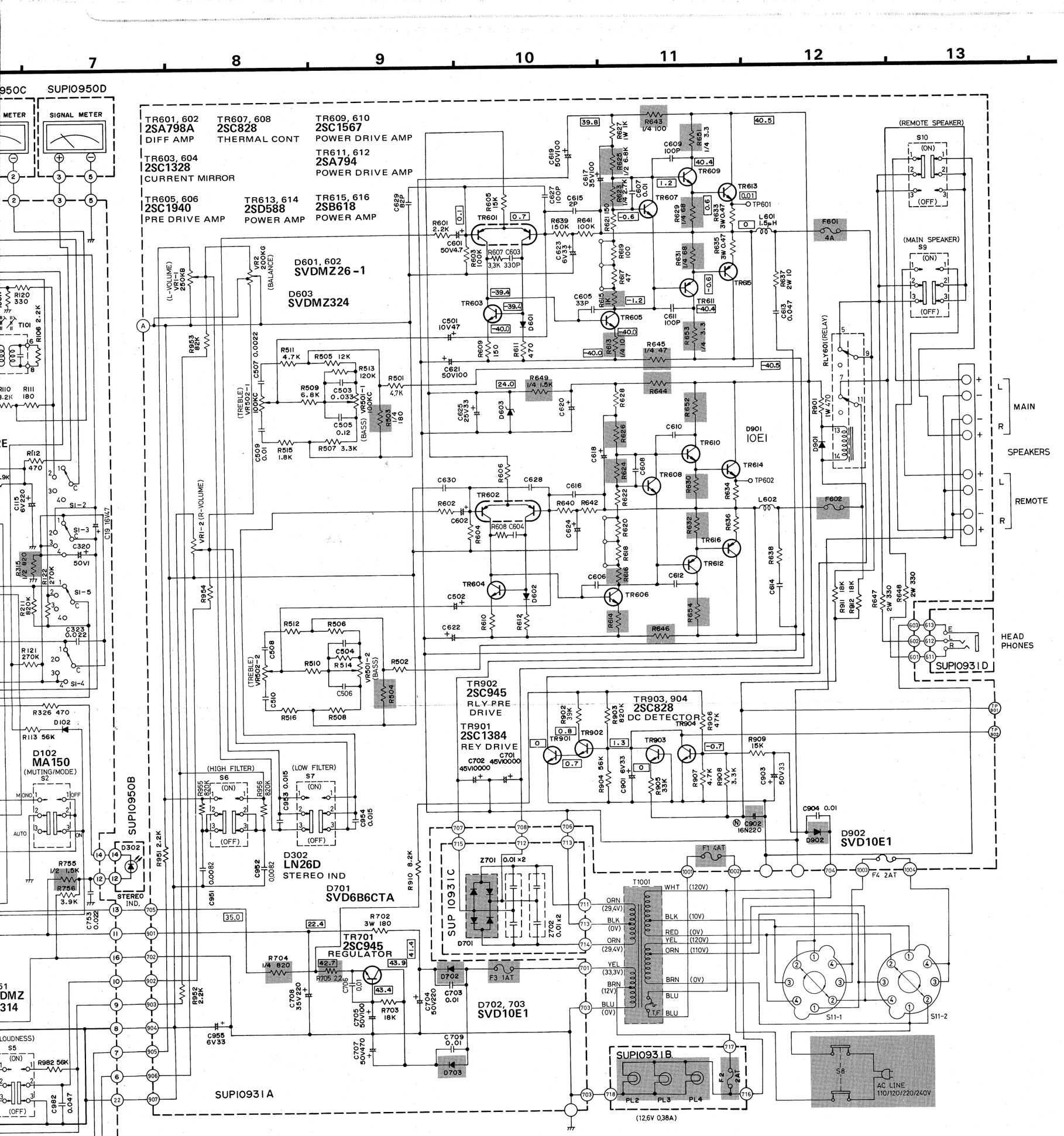
IC301 (AN363)
PLL FM MULTIPLEX CIRCUIT

Schematic Diagram ..... Model SA-5370/SA-5370K



BOTTOM VIEW

NOT
1. S
2. S
3. S
4. S
5. S
6. S
7. S
8. S
9. S
10. S



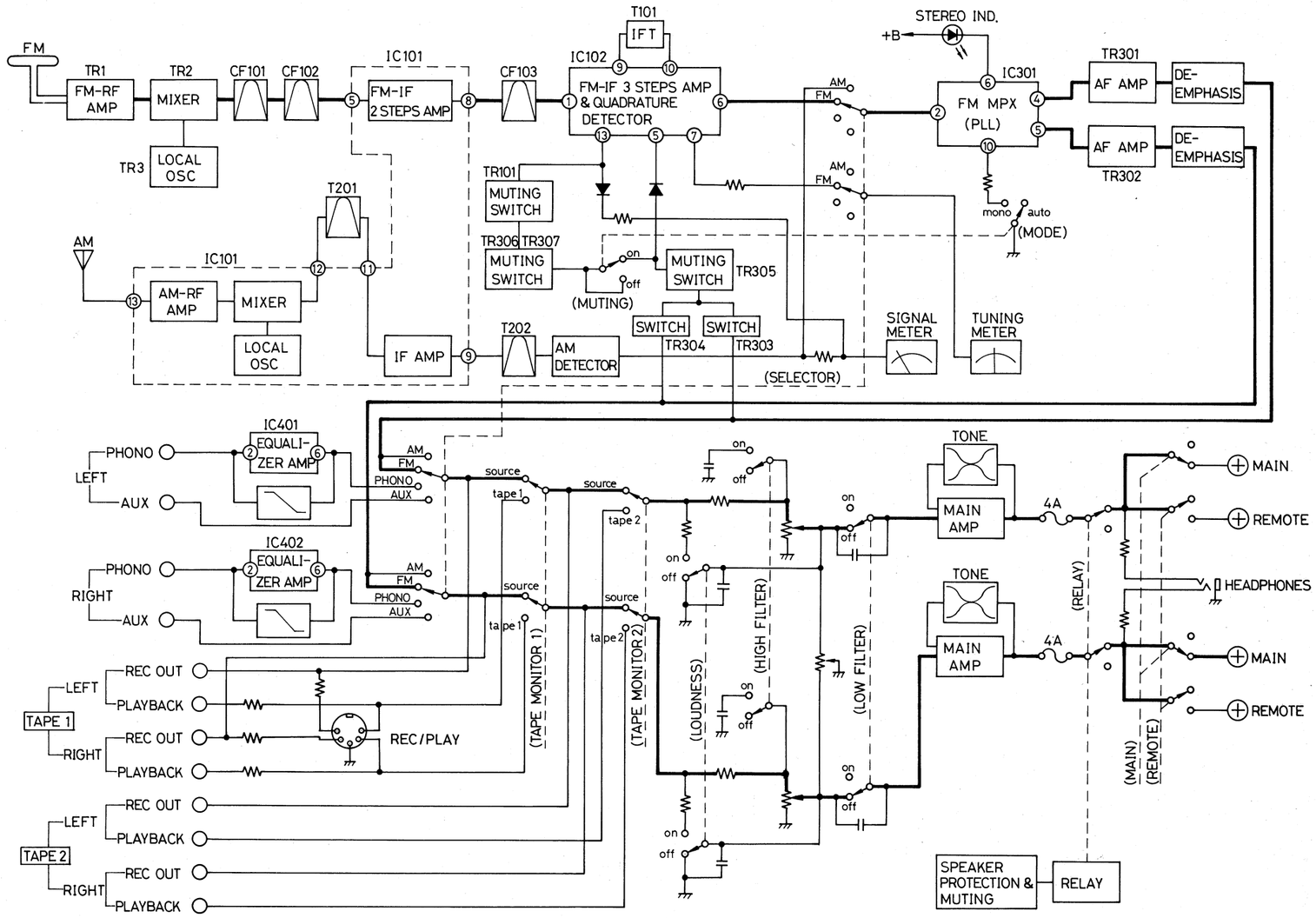
NOTES:

1. S1-1 – S1-6: Selector switch in "AM" position
   ① AM◄►② FM◄►③ PHONO◄►④ AUX
2. S2: FM muting/FM mode switch in "ON/FM AUTO" position"
3. S3: Tape monitor 2 switch in "SOURCE" position.
4. S4: Tape monitor 1 switch in "SOURCE" position.
5. S5: Loudness switch in "OFF" position.
6. S6: High-filter switch in "OFF" position.
7. S7: Low-filter switch in "OFF" position.
8. S8: Power source switch in "ON" position.
9. S9: Main speaker switch in "ON" position.
10. S10: Remote speaker switch in "OFF" position.
11. S11-1, S11-2: Voltage selector switch in "120V" position.
    ① 110V◄►②120V◄►③220V◄►④240V
12. Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.
    ▭ FM monoral signal reception.
    ( ) AM position.
    < > FM stereo signal reception.
    ⌜ ⌟ FM muting circuit operating position.
13. This schematic diagram may be modified at any time with the development of new technology.

IMPORTANT SAFETY NOTICE

THE SHADED AREA ON THIS SCHEMATIC DIAGRAM INCORPORATES SPECIAL FEATURES IMPORTANT FOR SAFETY. WHEN SERVICING IT IS ESSENTIAL THAT ONLY MANUFACTUR'S SPECIFIED PARTS BE USED FOR THE CRITICAL COMPONENTS IN THE SHADED AREAS OF THE SCHEMATIC.

■ BLOCK DIAGRAM



■ REPLACEMENT PARTS LIST

Important Safety Notice

Components identified by shaded area have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.

NOTE: 1. Part numbers are indicated on most mechanical parts.
Please use this part number for parts orders.

Ref. No.	Part No.	Part Name & Description	Per Set		Remarks
		INTEGRATED CIRCUITS			
IC101	AN217-BB	IC, FM IF Amplifier & AM Circuit	1		
IC102	AN377	IC, FM IF Amplifier & Detector	1		
IC301	AN363A	IC, PLL Type FM Multiplex	1		
IC401, 402	SVITA7129P	IC, Equalizer Amplifier	2		
		TRANSISTORS			
TR1	3SK40-M	Transistor (FET), FM RF Amplifier	1		
TR2	**2SC1047-C**	Transistor, FM Mix (Use in ranks C or D)	1		
TR3	2SC1675-L1	Transistor, FM Oscillator	1		
TR301, 302	**2SA902S-F**	Transistor, AF Amp. (Use in ranks F or G)	2		
TR305	**2SA666AI-R**	Transistor, Muting (Use in ranks P, Q or R)	1		
TR101, 303, 304, 306, 307	**2SC1328-T**	Transistor, Muting Switch (Use in ranks S, T or U)	5		
TR601, 602	**2SA798A-G2**	Transistor, Diffelential Amplifier (Use in ranks F2 or G2)	2		
TR603, 604	**2SC1328-T**	Transistor, Current Mirror (Use in ranks S, T or U)	2		
TR605, 606	2SC1940-K	Transistor, Pre Drive Amplifier (Use in ranks K or L)	2		○
TR607, 608	**2SC828A-R**	Transistor, Thermo Compensation	2		
TR609, 610	**2SC1567-Q**	Transistor, Drive Amplifier (Use in ranks P, Q or R)	2		
TR611, 612	**2SA794-Q**	Transistor, Drive Amplifier (Use in ranks P, Q or R)	2		
TR613, 614	2SD588-Q	Transistor, Power Amplifier (Use in ranks Q, R or S)	2		○
TR615, 616	2SB618-Q	Transistor, Power Amplifier (Use in ranks Q, R or S)	2		○
TR701, 902	**2SC945-R**	Transistor, Regulator & Relay Drive (Use in ranks P_1, P_2 or R)	2		
TR751	**2SC1398-Q**	Transistor, Regulator (Use in ranks, P, Q or R)	1		
TR903, 904	**2SC1328-T**	Transistor, DC Detector (Use in ranks S, T or U)	2		
TR901	**2SC1384A-Q**	Transistor, Relay Drive (in ranks Q or R)	1		
		DIODES			
D101, 102, 104, 204, 301	MA150	Diode, Switching	5		
D103	SVDKB262E	Diode, Muting	1		
D302	LN26D	Light Emitting Diode, Stereo Indicator	1		
D201, 202, 203	OA99	Diode, AGC & AM Detector	3		
D601, 602	SVDMZ26-1	Diode, Current Mirror	2		
D603	SVDMZ324	Zener Diode, 24V	1		
D701	SVD6B6CTA-2	Rectifier	1		
D702, 703, 901, 902	SVD10E1	Rectifier	4		
D751	SVDMZ314	Zener Diode, 14V	1		
		COILS and TRANSFORMERS			
L2	SLA4P25	Antenna Coil, FM	1		
L3	**RLQY25S-2**	Coil, Choke	1		
L4	SLD4P13	Coil, Collector (TR1)	1		
L5	**RLQY15G5**	Coil, Choke	1		

Ref. No.	Part No.	Part Name & Description	Per Set		Remarks
L6	SLO4P31	Oscillator Coil, FM	1		
L101	**SLQX180-1**	Coil, Choke	1		
L201	SLF2D41	Ferrite Antenna Coil, AM	1		
L202	SLO2C3-P	Oscillator Coil, AM	1		
L601, 602	SLQY15G-3U	Coil, Compensation	2		
T101	SLI4D513	IFT, FM Discriminator	1		
T201	SLI7D101-M	IFT, AM 1st, (Except set for [XE])	1		
T201 [XE] only	SLI7D103-M	IFT, AM 1st	1		
T202	RLI2C450	IFT, AM 2nd	1		
T1001[XA, XG, XGH, XGF, XSD, XSW]	SLT5Q53-W	Power Transformer	1		○
T1001 [XE]	SLT5Q55-W	Power Transformer	1		○
T1001 [XAL]	SLT5Q57-W	Power Transformer	1		○
		CERAMIC FILTERS			
CF101, 102, 103	SVFE107MA8A	Ceramic Filter, 10.7MHz, Red	each 3		
	SVFE107MA8B	Ceramic Filter, 10.67MHz, Blue			
	SVFE107MA8C	Ceramic Filter, 10.73MHz, Orange			
	SVFE107MA8D	Ceramic Filter, 10.64MHz, Black			
	SVFE107MA8E	Ceramic Filter, 10.76MHz, White			
	(Use pair ranks as same as CF101, 102 and CF103)				
		RESISTORS			
R1	**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ± 5%	1		
R2	**ERD25TJ181**	Carbon, 180Ω, 1/4W, ± 5%	1		
R3	**ERD25TJ822**	Carbon, 8.2kΩ, 1/4W, ± 5%	1		
R4	**ERD25TJ333**	Carbon, 33kΩ, 1/4W, ± 5%	1		
R5	**ERD25TJ102**	Carbon, 1kΩ, 1/4W, ± 5%	1		
R6	**ERD25TJ471**	Carbon, 470Ω, 1/4W, ± 5%	1		
R7	**ERD25TJ333**	Carbon, 33kΩ, 1/4W, ± 5%	1		
R8	**ERD25TJ153**	Carbon, 15kΩ, 1/4W, ± 5%	1		
R9	**ERD25TJ152**	Carbon, 1.5kΩ, 1/4W, ± 5%	1		
R10	**ERD25TJ101**	Carbon, 100Ω, 1/4W, ± 5%	1		
R11	**ERD25TJ101**	Carbon, 100Ω, 1/4W, ± 5%	1		
R12	**ERD25TJ333**	Carbon, 33kΩ, 1/4W, ± 5%	1		
R13	**ERD25TJ153**	Carbon, 15kΩ, 1/4W, ± 5%	1		
R14	ERD12TSJ563	Carbon, 56kΩ, 1/2W, ± 5% (Except set for [XAL])	1		
R15	ERD12TSJ563	Carbon, 56kΩ, 1/2W, ± 5% (Except set for [XAL])	1		
R17	**ERD25TJ101**	Carbon, 100Ω, 1/4W, ± 5%	1		
R101	**ERD25TJ102**	Carbon, 1kΩ, 1/4W, ± 5%	1		
R102	**ERD25TJ331**	Carbon, 330Ω, 1/4W, ± 5%	1		
R103	**ERD25TJ331**	Carbon, 330Ω, 1/4W, ± 5%	1		
R104	**ERD25TJ331**	Carbon, 330Ω, 1/4W, ± 5%	1		
R105	**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ± 5%	1		
R106	**ERD25TJ222**	Carbon, 2.2kΩ, 1/4W, ± 5%	1		
R107	**ERD25TJ181**	Carbon, 180Ω, 1/4W, ± 5%	1		
R108	**ERD25TJ101**	Carbon, 100Ω, 1/4W, ± 5%	1		
R109	**ERD25TJ562**	Carbon, 5.6kΩ, 1/4W, ± 5%	1		
R110	**ERD25TJ822**	Carbon, 8.2kΩ, 1/4W, ± 5%	1		
R111	**ERD25TJ181**	Carbon, 180Ω, 1/4W, ± 5%	1		
R112	**ERD25TJ471**	Carbon, 470Ω, 1/4W, ± 5%	1		
R113	**ERD25TJ563**	Carbon, 56kΩ, 1/4W, ± 5%	1		
R114	**ERD25TJ392**	Carbon, 3.9kΩ, 1/4W, ± 5%	1		
R115	**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ± 5%	1		

Ref. No.	Part No.	Part Name & Description	Per Set		Remarks
R116	**ERD25TJ331**	Carbon, 330Ω, 1/4W, ± 5%	1		
R117	**ERD25TJ333**	Carbon, 33kΩ, 1/4W, ± 5%	1		
R118	**ERD25TJ274**	Carbon, 270kΩ, 1/4W, ± 5%	1		
R119	**ERD25TJ223**	Carbon, 22kΩ, 1/4W, ± 5%	1		
R120	**ERD25TJ331**	Carbon, 330Ω, 1/4W, ± 5%	1		
R121	**ERD25TJ274**	Carbon, 270kΩ, 1/4W, ± 5%	1		
R122	**ERD25TJ274**	Carbon, 270kΩ, 1/4W, ± 5%	1		
R201	**ERD25TJ152**	Carbon, 1.5kΩ, 1/4W, ± 5%	1		
R202	**ERD25TJ392**	Carbon, 3.9kΩ, 1/4W, ± 5%	1		
R203	**ERD25TJ562**	Carbon, 5.6kΩ, 1/4W, ± 5%	1		
R204	**ERD25TJ274**	Carbon, 270kΩ, 1/4W, ± 5%	1		
R205	**ERD25TJ333**	Carbon, 33kΩ, 1/4W, ± 5%	1		
R206	**ERD25TJ471**	Carbon, 470Ω, 1/4W, ± 5%	1		
R207	**ERD25TJ272**	Carbon, 2.7kΩ, 1/4W, ± 5%	1		
R208	**ERD25TJ392**	Carbon, 3.9kΩ, 1/4W, ± 5%	1		
R209	**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ± 5%	1		
R210	**ERD25TJ333**	Carbon, 33kΩ, 1/4W, ± 5%	1		
R211	**ERD25TJ824**	Carbon, 820kΩ, 1/4W, ± 5%	1		
R212	**ERD25TJ153**	Carbon, 15kΩ, 1/4W, ± 5%	1		
R301	**ERD25TJ680**	Carbon, 68Ω, 1/4W, ± 5%	1		
R302	**ERD25TJ333**	Carbon, 33kΩ, 1/4W, ± 5%	1		
R303	**ERD25TJ152**	Carbon, 1.5kΩ, 1/4W, ± 5%	1		
R304	**ERD25TJ152**	Carbon, 1.5kΩ, 1/4W, ± 5%	1		
R305	**ERD25TJ103**	Carbon, 10kΩ, 1/4W, ± 5%	1		
R306	**ERD25TJ103**	Carbon, 10kΩ, 1/4W, ± 5%	1		
R307	**ERD25TJ103**	Carbon, 10kΩ, 1/4W, ± 5%	1		
R308	**ERD25TJ103**	Carbon, 10kΩ, 1/4W, ± 5%	1		
R309	**ERD25TJ391**	Carbon, 390Ω, 1/4W, ± 5%	1		
R310	**ERD25TJ391**	Carbon, 390Ω, 1/4W, ± 5%	1		
R311	**ERD25TJ392**	Carbon, 3.9kΩ, 1/4W, ± 5%	1		
R312	**ERD25TJ392**	Carbon, 3.9kΩ, 1/4W, ± 5%	1		
R313	**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ± 5%	1		
R314	**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ± 5%	1		
R315	ERD12FJ821	Carbon, 820Ω, 1/2W, ± 5%	1		
R316	**ERD25TJ102**	Carbon, 1kΩ, 1/4W, ± 5%	1		
R317	**ERD25TJ123**	Carbon, 12kΩ, 1/4W, ± 5%	1		
R318	**ERD25TJ333**	Carbon, 33kΩ, 1/4W, ± 5%	1		
R319	**ERD25TJ563**	Carbon, 56kΩ, 1/4W, ± 5%	1		
R320	**ERD25TJ103**	Carbon, 10kΩ, 1/4W, ± 5%	1		
R321	**ERD25TJ824**	Carbon, 820kΩ, 1/4W, ± 5%	1		
R322	**ERD25TJ103**	Carbon, 10kΩ, 1/4W, ± 5%	1		
R323	**ERD25TJ103**	Carbon, 10kΩ, 1/4W, ± 5%	1		
R324	**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ± 5%	1		
R325	**ERD25TJ223**	Carbon, 22kΩ, 1/4W, ± 5%	1		
R326	**ERD25TJ471**	Carbon, 470Ω, 1/4W, ± 5%	1		
R327	**ERD25TJ120**	Carbon, 12Ω, 1/4W, ± 5%	1		
R328	**ERD25TJ471**	Carbon, 470Ω, 1/4W, ± 5%	1		
R401	ERD12TSJ124	Carbon, 120kΩ, 1/2W, ± 5%	1		
R402	ERD12TSJ124	Carbon, 120kΩ, 1/2W, ± 5%	1		
R403	**ERD25TJ561**	Carbon, 560Ω, 1/4W, ± 5%	1		
R404	**ERD25TJ561**	Carbon, 560Ω, 1/4W, ± 5%	1		
R405	**ERD25TJ101**	Carbon, 100Ω, 1/4W, ± 5%	1		
R406	**ERD25TJ101**	Carbon, 100Ω, 1/4W, ± 5%	1		
R407	**ERD25TJ331**	Carbon, 330Ω, 1/4W, ± 5%	1		
R408	**ERD25TJ331**	Carbon, 330Ω, 1/4W, ± 5%	1		
R409	ERD12TSJ823	Carbon, 82kΩ, 1/2W, ± 5%	1		

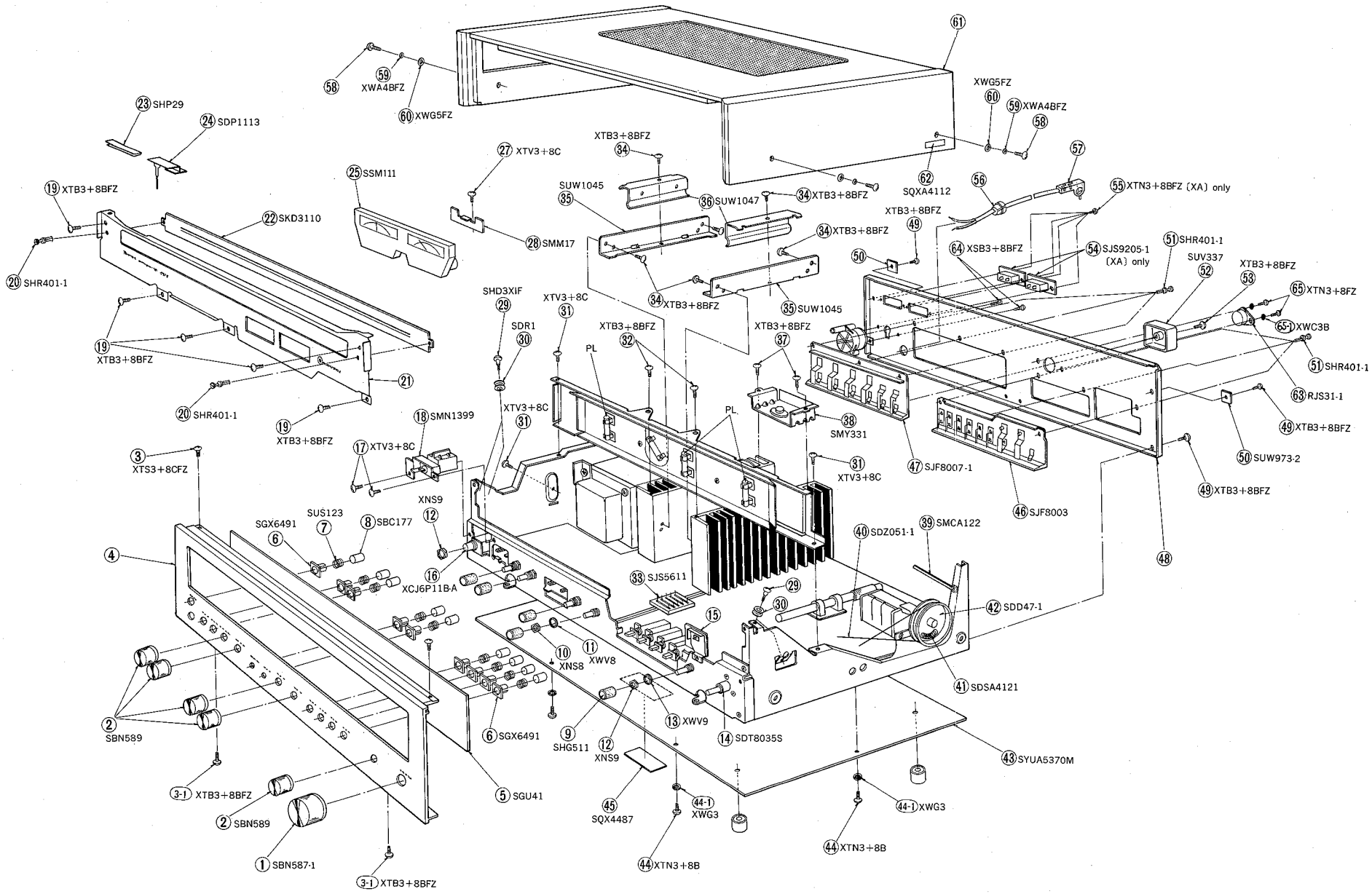
Ref. No.	Part No.	Part Name & Description	Per Set		Remarks
R410	ERD12TSJ823	Carbon, 82kΩ, 1/2W, ± 5%	1		
R411	ERO25CKF1743	Metal Film, 174kΩ, 1/4W, ± 1%	1		○
R412	ERO25CKF1743	Metal Film, 174kΩ, 1/4W, ± 1%	1		○
R413	ERO25CKF1502	Metal Film, 15kΩ, 1/4W, ± 1%	1		○
R414	ERO25CKF1502	Metal Film, 15kΩ, 1/4W, ± 1%	1		○
R415	ERD12TSJ274	Carbon, 270kΩ, 1/2W, ± 5%	1		
R416	ERD12TSJ274	Carbon, 270kΩ, 1/2W, ± 5%	1		
R417	**ERD25TJ393**	Carbon, 39kΩ, 1/4W, ± 5%	1		
R418	**ERD25TJ393**	Carbon, 39kΩ, 1/4W, ± 5%	1		
R419	**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ± 5%	1		
R420	**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ± 5%	1		
R501	**ERG1ANJ472**	Metal Film, 4.7kΩ, 1W, ± 5%	1		
R502	**ERG1ANJ472**	Metal Film, 4.7kΩ, 1W, ± 5%	1		
R503	**ERD14FJ181**	Carbon, 180Ω, 1/4W, ± 5%	1		
R504	**ERD14FJ181**	Carbon, 180Ω, 1/4W, ± 5%	1		
R505	**ERD25TJ123**	Carbon, 12kΩ, 1/4W, ± 5%	1		
R506	**ERD25TJ123**	Carbon, 12kΩ, 1/4W, ± 5%	1		
R507	**ERD25TJ332**	Carbon, 3.3kΩ, 1/4W, ± 5%	1		
R508	**ERD25TJ332**	Carbon, 3.3kΩ, 1/4W, ± 5%	1		
R509	**ERD25TJ682**	Carbon, 6.8kΩ, 1/4W, ± 5%	1		
R510	**ERD25TJ682**	Carbon, 6.8kΩ, 1/4W, ± 5%	1		
R511	**ERD25TJ472**	Carbon, 4.7kΩ, 1/4W, ± 5%	1		
R512	**ERD25TJ472**	Carbon, 4.7kΩ, 1/4W, ± 5%	1		
R513	**ERD25TJ124**	Carbon, 120kΩ, 1/4W, ± 5%	1		
R514	**ERD25TJ124**	Carbon, 120kΩ, 1/4W, ± 5%	1		
R515	**ERD25TJ182**	Carbon, 1.8kΩ, 1/4W, ± 5%	1		
R516	**ERD25TJ182**	Carbon, 1.8kΩ, 1/4W, ± 5%	1		
R601	**ERD25TJ222**	Carbon, 2.2kΩ, 1/4W, ± 5%	1		
R602	**ERD25TJ222**	Carbon, 2.2kΩ, 1/4W, ± 5%	1		
R603	**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ± 5%	1		
R604	**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ± 5%	1		
R605	**ERD25TJ153**	Carbon, 15kΩ, 1/4W, ± 5%	1		
R606	**ERD25TJ153**	Carbon, 15kΩ, 1/4W, ± 5%	1		
R607	**ERD25TJ332**	Carbon, 3.3kΩ, 1/4W, ± 5%	1		
R608	**ERD25TJ332**	Carbon, 3.3kΩ, 1/4W, ± 5%	1		
R609	**ERD25TJ151**	Carbon, 150Ω, 1/4W, ± 5%	1		
R610	**ERD25TJ151**	Carbon, 150Ω, 1/4W, ± 5%	1		
R611	**ERD25TJ471**	Carbon, 470Ω, 1/4W, ± 5%	1		
R612	**ERD25TJ471**	Carbon, 470Ω, 1/4W, ± 5%	1		
R613	**ERD14FJ100**	Carbon, 10Ω, 1/4W, ± 5%	1		
R614	**ERD14FJ100**	Carbon, 10Ω, 1/4W, ± 5%	1		
R615	**ERD18FJ102**	Carbon, 1kΩ, 1/8W, ± 5%	1		
R616	**ERD18FJ102**	Carbon, 1kΩ, 1/8W, ± 5%	1		
R617	**ERD25TJ470**	Carbon, 47Ω, 1/4W, ± 5%	1		
R618	**ERD25TJ470**	Carbon, 47Ω, 1/4W, ± 5%	1		
R619	**ERD25TJ101**	Carbon, 100Ω, 1/4W, ± 5%	1		
R620	**ERD25TJ101**	Carbon, 100Ω, 1/4W, ± 5%	1		
R621	**ERD25TJ151**	Carbon, 150Ω, 1/4W, ± 5%	1		
R622	**ERD25TJ151**	Carbon, 150Ω, 1/4W, ± 5%	1		
R623	**ERD14FJ272**	Carbon, 2.7kΩ, 1/4W, ± 5%	1		
R624	**ERD14FJ272**	Carbon, 2.7kΩ, 1/4W, ± 5%	1		
R625	ERD12FJ682	Carbon, 6.8kΩ, 1/2W, ± 5%	1		
R626	ERD12FJ682	Carbon, 6.8kΩ, 1/2W, ± 5%	1		
R627	**ERG1ANJ102**	Metal Film, 1kΩ, 1W, ± 5%	1		
R628	**ERG1ANJ102**	Metal Film, 1kΩ, 1W, ± 5%	1		
R629	**ERD14FJ680**	Carbon, 68Ω, 1/4W, ± 5%	1		

Ref. No.	Part No.	Part Name & Description	Per Set	Remarks
R630	**ERD14FJ680**	Carbon, 68Ω, 1/4W, ± 5%	1	
R631	**ERD14FJ680**	Carbon, 68Ω, 1/4W, ± 5%	1	
R632	**ERD14FJ680**	Carbon, 68Ω, 1/4W, ± 5%	1	
R633	**ERX3ANJR47**	Metal Film, 0.47Ω, 3W, ± 5%	1	
R634	**ERX3ANJR47**	Metal Film, 0.47Ω, 3W, ± 5%	1	
R635	**ERX3ANJR47**	Metal Film, 0.47Ω, 3W, ± 5%	1	
R636	**ERX3ANJR47**	Metal Film, 0.47Ω, 3W, ± 5%	1	
R637	**ERX2ANJ100**	Metal Film, 10Ω, 2W, ± 5%	1	
R638	**ERX2ANJ100**	Metal Film, 10Ω, 2W, ± 5%	1	
R639	**ERD25TJ154**	Carbon, 150kΩ, 1/4W, ± 5%	1	
R640	**ERD25TJ154**	Carbon, 150kΩ, 1/4W, ± 5%	1	
R641	**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ± 5%	1	
R642	**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ± 5%	1	
R643	**ERD14FJ101**	Carbon, 100Ω, 1/4W, ± 5%	1	
R644	**ERD14FJ101**	Carbon, 100Ω, 1/4W, ± 5%	1	
R645	**ERD14FJ470**	Carbon, 47Ω, 1/4W, ± 5%	1	
R646	**ERD14FJ470**	Carbon, 47Ω, 1/4W, ± 5%	1	
R647	**ERG2ANJ331**	Metal Film, 330Ω, 2W, ± 5%	1	
R648	**ERG2ANJ331**	Metal Film, 330Ω, 2W, ± 5%	1	
R649	**ERD14FJ152**	Carbon, 1.5kΩ, 1/4W, ± 5%	1	
R651	**ERD14FJ3R3**	Carbon, 3.3Ω, 1/4W, ± 5%	1	
R652	**ERD14FJ3R3**	Carbon, 3.3Ω, 1/4W, ± 5%	1	
R653	**ERD14FJ3R3**	Carbon, 3.3Ω, 1/4W, ± 5%	1	
R654	**ERD14FJ3R3**	Carbon, 3.3Ω, 1/4W, ± 5%	1	
R702	**ERG3ANJ181**	Metal Film, 180Ω, 3W, ± 5%	1	
R703	**ERD25TJ183**	Carbon, 18kΩ, 1/4W, ± 5%	1	
R704	**ERD14FJ821**	Carbon, 820Ω, 1/4W, ± 5%	1	
R705	ERD18FAJ2R2	Carbon, 2.2Ω, 1/8W, ± 5%	1	
R751	ERD12FJ220	Carbon, 22Ω, 1/2W, ± 5%	1	
R752	ERD12FJ471	Carbon, 470Ω, 1/2W, ± 5%	1	
R753	**ERD25TJ181**	Carbon, 180Ω, 1/4W, ± 5%	1	
R755	ERD12FJ152	Carbon, 1.5kΩ, 1/2W, ± 5%	1	
R756	**ERD25TJ392**	Carbon, 3.9kΩ, 1/4W, ± 5%	1	
R901	**ERG1ANJ471**	Metal Film, 470Ω, 1W, ± 5%	1	
R902	**ERD25TJ393**	Carbon, 39kΩ, 1/4W, ± 5%	1	
R903	**ERD25TJ824**	Carbon, 820kΩ, 1/4W, ± 5%	1	
R904	**ERD25TJ563**	Carbon, 56kΩ, 1/4W, ± 5%	1	
R905	**ERD25TJ333**	Carbon, 33kΩ, 1/4W, ± 5%	1	
R906	**ERD25TJ473**	Carbon, 47kΩ, 1/4W, ± 5%	1	
R907	**ERD25TJ472**	Carbon, 4.7kΩ, 1/4W, ± 5%	1	
R908	**ERD25TJ332**	Carbon, 3.3kΩ, 1/4W, ± 5%	1	
R909	**ERD25TJ153**	Carbon, 15kΩ, 1/4W, ± 5%	1	
R910	**ERD25TJ822**	Carbon, 8.2kΩ, 1/4W, ± 5%	1	
R911	**ERD25TJ183**	Carbon, 18kΩ, 1/4W, ± 5%	1	
R912	**ERD25TJ183**	Carbon, 18kΩ, 1/4W, ± 5%	1	
R951	**ERD25TJ222**	Carbon, 2.2kΩ, 1/4W, ± 5%	1	
R952	**ERD25TJ222**	Carbon, 2.2kΩ, 1/4W, ± 5%	1	
R953	**ERD25TJ823**	Carbon, 82kΩ, 1/4W, ± 5%	1	
R954	**ERD25TJ823**	Carbon, 82kΩ, 1/4W, ± 5%	1	
R955	**ERD25TJ824**	Carbon, 820kΩ, 1/4W, ± 5%	1	
R956	**ERD25TJ824**	Carbon, 820kΩ, 1/4W, ± 5%	1	
R981	**ERD25TJ563**	Carbon, 56kΩ, 1/4W, ± 5%	1	
R982	**ERD25TJ563**	Carbon, 56kΩ, 1/4W, ± 5%	1	
R987	**ERD25TJ472**	Carbon, 4.7kΩ, 1/4W, ± 5%	1	
R988	**ERD25TJ472**	Carbon, 4.7kΩ, 1/4W, ± 5%	1	
R989	**ERD25TJ472**	Carbon, 4.7kΩ, 1/4W, ± 5%	1	
R990	**ERD25TJ472**	Carbon, 4.7kΩ, 1/4W, ± 5%	1	
R991	**ERD25TJ474**	Carbon, 470kΩ, 1/4W, ± 5%	1	
R992	**ERD25TJ474**	Carbon, 470kΩ, 1/4W, ± 5%	1	
R993	**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ± 5%	1	
R994	**ERD25TJ104**	Carbon, 100kΩ, 1/4W, ± 5%	1	
VARIABLE RESISTORS				
VR1	EWKBJAF25BF5	Volume Control, 250kΩ (B)	1	
VR2	EVHGSAF25G25	Balance Control, 200kΩ (G)	1	O
VR101	**EVLT0AA00B24**	Muting Level Adjustment, 20kΩ (B)	1	
VR102	**EVLT0AA00B35**	Meter Adjustment, 300kΩ (B)	1	
VR301	EVTS3MA00B14	PLL VCO (19kHz) Adjustment, 10kΩ (B)	1	
VR302	EVTS3MA00B14	Separation Adjustment 10kΩ (B)	1	
VR501, 502	EWKGRA033C15	Bass & Treble Control 100kΩ (C)	1	O
CAPACITORS				
C 1	ECCD1H120KC	Ceramic, 12pF, 50V, ±10%	1	
C 2	ECCD1H220K	Ceramic, 22pF, 50V, ±10%	1	
C 3	ECCD1H180KR	Ceramic, 18pF, 50V, ±10%	1	
C 4	ECKD1H102MDA	Ceramic, 0.001μF, 50V, ±20%	1	
C 5	ECCD1H030CC	Ceramic, 3pF, 50V, ±0.25pF	1	
C 6	ECCD1H181K	Ceramic, 180pF, 50V, ±10%	1	
C 7	ECKD1H103PF	Ceramic, 0.01μF, 50V, ±100%	1	
C 8	ECKD1H103PF	Ceramic, 0.01μF, 50V, ±100%	1	
C 9	ECCD1H0R5CC	Ceramic, 0.5pF, 50V, ±0.25pF	1	
C10	ECCD1H150KS	Ceramic, 15pF, 50V, ±10%	1	
C11	ECCD1H070DC	Ceramic, 7pF, 50V, ±0.5pF	1	
C12	ECCD1H390KC	Ceramic, 39pF, 50V, ±10%	1	
C13	ECCD1H150KC	Ceramic, 15pF, 50V, ±10%	1	
C14	ECKD1H102PF	Ceramic, 0.001μF, 50V, ±100%	1	
C15	ECCD1H050CC	Ceramic, 5pF, 50V, ±0.25pF	1	
C16	ECCD1H150KC	Ceramic, 15pF, 50V, ±10%	1	
C17	ECCD1H150KC	Ceramic, 15pF, 50V, ±10%	1	
C18	ECKD1H102PF	Ceramic, 0.001μF, 50V, ±100%	1	
C19	ECEA16V47	Electrolytic, 47μF, 16V	1	
C20	ECCD1H100KC	Ceramic, 10pF, 50V, ±10%	1	
C22	ECKD1H102PF	Ceramic, 0.001μF, 50V, ±100%	1	
C23 [XAL] only	ECKDHS101MB	Ceramic, 100pF, 400VAC, ±20%	1	
C24 [XAL] only	ECKDHS101MB	Ceramic, 100pF, 400VAC, ±20%	1	
C101	ECKD1H223PF	Ceramic, 0.022μF, 50V, ±100%	1	
C102	ECKD1H223PF	Ceramic, 0.022μF, 50V, ±100%	1	
C103	ECKD1H223PF	Ceramic, 0.022μF, 50V, ±100%	1	
C104	ECKD1H223PF	Ceramic, 0.022μF, 50V, ±100%	1	
C105	ECKD1H223PF	Ceramic, 0.022μF, 50V, ±100%	1	
C106	ECEA50V3R3	Electrolytic, 3.3μF, 50V	1	
C107	ECCD1H680K	Ceramic, 68pF, 50V, ±10%	1	
C108	ECEA50V1	Electrolytic, 1μF, 50V	1	
C110	ECKD1H223PF	Ceramic, 0.022μF, 50V, ±100%	1	
C111	ECEA16V10	Electrolytic, 10μF, 16V	1	
C112	ECKD1H223PF	Ceramic, 0.022μF, 50V, ±100%	1	
C113	ECKD1H223PF	Ceramic, 0.022μF, 50V, ±100%	1	
C114	ECKD1H103PF	Ceramic, 0.01μF, 50V, ±100%	1	
C115	**ECEA6V220V**	Electrolytic, 220μF, 6.3V	1	
C116	ECEA50VR47	Electrolytic, 0.47μF, 50V	1	
C117	ECKD1H223PF	Ceramic, 0.022μF, 50V, ±100%	1	

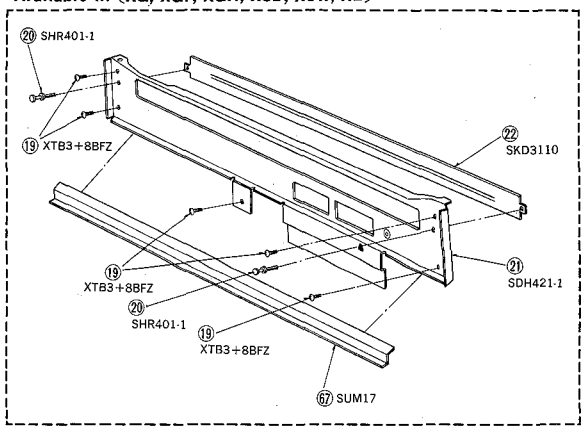
Ref. No.	Part No.	Part Name & Description	Per Set		Remarks
C201	ECKD1H103PF	Ceramic, 0.01μF, 50V, ±10%	1		
C202	ECKD1H103MD	Ceramic, 0.01μF, 50V, ±20%	1		
C203	ECKD1H223PF	Ceramic, 0.022μF, 50V, ±10%	1		
C204	ECKD1H103PF	Ceramic, 0.01μF, 50V, ±10%	1		
C205	ECKD1H103PF	Ceramic, 0.01μF, 50V, ±10%	1		
C206	ECEA50V3R3	Electrolytic, 3.3μF, 50V	1		
C207	ECCD1H390KC	Ceramic, 39pF, 50V, ±10%	1		
C208	ECEA50VR47	Electrolytic, 0.47μF, 50V	1		
C209	ECKD1H103PF	Ceramic, 0.01μF, 50V, ±10%	1		
C210	ECKD1H103MD	Ceramic, 0.01μF, 50V, ±20%	1		
C211	ECKD1H223KZ	Ceramic, 0.022μF, 50V, ±10%	1		
C212 [XAEJ] only	ECKDHS102MD	Ceramic, 0.001μF, 400VAC, ±20%	1		
C301	ECQM1H333JZ	Polyester, 0.033μF, 50V, ± 5%	1		
C302	ECQM1H333JZ	Polyester, 0.033μF, 50V, ± 5%	1		
C303	ECQM1H332KZ	Polyester, 0.0033μF, 50V, ±10%	1		
C304	ECQM1H332KZ	Polyester, 0.0033μF, 50V, ±10%	1		
C305	ECKD1H271KB	Ceramic, 270pF, 50V, ±10%	1		
C306	ECKD1H271KB	Ceramic, 270pF, 50V, ±10%	1		
C307	ECQM1H182KZ	Polyester, 0.0018μF, 50V, ±10%	1		
C308	ECQM1H182KZ	Polyester, 0.0018μF, 50V, ±10%	1		
C309	ECEA50MR22R	Electrolytic, 0.22μF, 50V	1		
C310	ECEA50MR22R	Electrolytic, 0.22μF, 50V	1		
C311	**ECEA16V100V**	Electrolytic, 100μF, 16V	1		
C312	ECEA16V47	Electrolytic, 47μF, 16V	1		
C313	ECEA50M1R	Electrolytic, 1μF, 50V	1		
C314	ECEA50VR47	Electrolytic, 0.47μF, 50V	1		
C315	ECEA50VR47	Electrolytic, 0.47μF, 50V	1		
C316	ECQS05471JZG	Polystyrene, 470pF, 50V, ± 5%	1		○
C317	ECQM1H473KZ	Polyester, 0.047μF, 50V, ±10%	1		
C318	ECEA50V3R3	Electrolytic, 3.3μF, 50V	1		
C319	ECKD1H103PF	Ceramic, 0.01μF, 50V, ±10%	1		
C320	ECEA50V1	Electrolytic, 1μF, 50V	1		
C321	ECQM1H222KZ	Polyester, 0.0022μF, 50V, ±10%	1		
C322	ECEA50V1	Electrolytic, 1μF, 50V	1		
C323	ECKD1H223PF	Ceramic, 0.022μF, 50V, ±10%	1		
C324	ECKD1H103PF	Ceramic, 0.01μF, 50V, ±10%	1		
C401	ECCD1H680K	Ceramic, 68pF, 50V, ±10%	1		
C402	ECCD1H680K	Ceramic, 68pF, 50V, ±10%	1		
C403	ECCD1H151K	Ceramic, 150pF, 50V, ±10%	1		
C404	ECCD1H151K	Ceramic, 150pF, 50V, ±10%	1		
C405	ECEA50M3R3R	Electrolytic, 3.3μF, 50V	1		
C406	ECEA50M3R3R	Electrolytic, 3.3μF, 50V	1		
C407	ECKD1H681KB	Ceramic, 680pF, 50V, ±10%	1		
C408	ECKD1H681KB	Ceramic, 680pF, 50V, ±10%	1		
C409	**ECEA10V330V**	Electrolytic, 330μF, 10V	1		
C410	**ECEA10V330V**	Electrolytic, 330μF, 10V			
C411	ECQF1183GZN	Polypropylene, 0.018μF, 125V, ± 2%	1		
C412	ECQF1183GZN	Polypropylene, 0.018μF, 125V, ± 2%	1		
C413	ECQF1472GZN	Polypropylene, 0.0047μF, 125V, ± 2%	1		
C414	ECQF1472GZN	Polypropylene, 0.0047μF, 125V, ± 2%	1		
C415	ECKD1H331KB	Ceramic, 330pF, 50V, ±10%	1		
C416	ECKD1H331KB	Ceramic, 330pF, 50V, ±10%	1		
C417	ECEA50M1R	Electrolytic, 1μF, 50V	1		
C418	ECEA50M1R	Electrolytic, 1μF, 50V	1		
C419	**ECEA50V220V**	Electrolytic, 220μF, 50V	1		
C421	ECKD1H681KB	Ceramic, 680pF, 50V, ±10%	1		

Ref. No.	Part No.	Part Name & Description	Per Set		Remarks
C422	ECKD1H681KB	Ceramic, 680pF, 50V, ±10%	1		
C501	ECEA10V47	Electrolytic, 47μF, 10V	1		
C502	ECEA10V47	Electrolytic, 47μF, 10V	1		
C503	ECQM1H333KZ	Polyester, 0.033μF, 50V, ±10%	1		
C504	ECQM1H333KZ	Polyester, 0.033μF, 50V, ±10%	1		
C505	ECQM1H124KZ	Polyester, 0.12μF, 50V, ±10%	1		
C506	ECQM1H124KZ	Polyester, 0.12μF, 50V, ±10%	1		
C507	ECQM1H222KZ	Polyester, 0.0022μF, 50V, ±10%	1		
C508	ECQM1H222KZ	Polyester, 0.0022μF, 50V, ±10%	1		
C509	ECQM1H103KZ	Polyester, 0.01μF, 50V, ±10%	1		
C510	ECQM1H103KZ	Polyester, 0.01μF, 50V, ±10%	1		
C601	ECEA50M4R7R	Electrolytic, 4.7μF, 50V	1		
C602	ECEA50M4R7R	Electrolytic, 4.7μF, 50V	1		
C603	ECCD1H331K	Ceramic, 330pF, 50V, ±10%	1		
C604	ECCD1H331K	Ceramic, 330pF, 50V, ±10%	1		
C605	ECCD2H330K	Ceramic, 33pF, 500V, ±10%	1		
C606	ECCD2H330K	Ceramic, 33pF, 500V, ±10%	1		
C607	ECKD1H103PF	Ceramic, 0.01μF, 50V, ±10%	1		
C608	ECKD1H103PF	Ceramic, 0.01μF, 50V, ±10%	1		
C609	ECCD2H101K	Ceramic, 100pF, 500V, ±10%	1		
C610	ECCD2H101K	Ceramic, 100pF, 500V, ±10%	1		
C611	ECCD2H101K	Ceramic, 100pF, 500V, ±10%	1		
C612	ECCD2H101K	Ceramic, 100pF, 500V, ±10%	1		
C613	ECQM1H473KZ	Polyester, 0.047μF, 50V, ±10%	1		
C614	ECQM1H473KZ	Polyester, 0.047μF, 50V, ±10%	1		
C615	ECCD1H020C	Ceramic, 2pF, 50V, ±0.25pF	1		
C616	ECCD1H020C	Ceramic, 2pF, 50V, ±0.25pF	1		
C617	**ECEA35V100V**	Electrolytic, 100μF, 35V	1		
C618	**ECEA35V100V**	Electrolytic, 100μF, 35V	1		
C619	**ECEA50V100V**	Electrolytic, 100μF, 50V	1		
C620	**ECEA50V100V**	Electrolytic, 100μF, 50V	1		
C621	**ECEA50V100V**	Electrolytic, 100μF, 50V	1		
C622	**ECEA50V100V**	Electrolytic, 100μF, 50V	1		
C623	ECEA6V33	Electrolytic, 33μF, 6.3V	1		
C624	ECEA6V33	Electrolytic, 33μF, 6.3V	1		
C625	ECEA25V33	Electrolytic, 33μF, 25V	1		
C627	ECCD1H101K	Ceramic, 100pF, 50V, ±10%	1		
C628	ECCD1H101K	Ceramic, 100pF, 50V, ±10%	1		
C629	ECCD1H820K	Ceramic, 82pF, 50V, ±10%	1		
C630	ECCD1H820K	Ceramic, 82pF, 50V, ±10%	1		
C701	ECET45R103Y	Electrolytic, 10000μF, 45V	1		○
C702	ECET45R103Y	Electrolytic, 10000μF, 45V	1		○
C703	ECKD2H103PF	Ceramic, 0.01μF, 500V, ±10%	1		
C704	**ECEA50V220V**	Electrolytic, 220μF, 50V	1		
C705	**ECEA50V100V**	Electrolytic, 100μF, 50V	1		
C706	ECKD1H103PF	Ceramic, 0.01μF, 50V	1		
C707	**ECEA50V470V**	Electrolytic, 470μF, 50V	1		
C708	**ECEA35V220V**	Electrolytic, 220μF, 35V	1		
C709	ECKD2H103PF	Ceramic, 0.01μF, 500V, ±10%	1		
C751	ECKD1H103PF	Ceramic, 0.01μF, 50V, ±10%	1		
C752	**ECEA16V100V**	Electrolytic, 100μF, 16V	1		
C901	ECEA6V33	Electrolytic, 33μF, 6.3V	1		
C902	**ECEA16N220V**	Non-Polar Electrolytic, 220μF, 16V	1		
C903	**ECEA50Z3R3**	Electrolytic, 3.3μF, 50V	1		
C904	ECKD1H103PF	Ceramic, 0.01μF, 50V, ±10%	1		

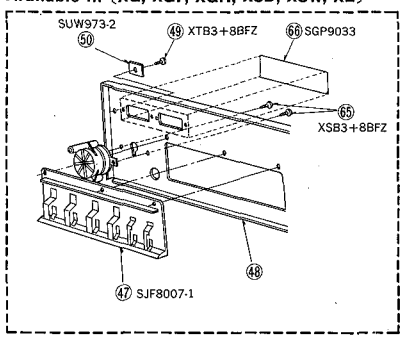
■ EXPLODED VIEWS



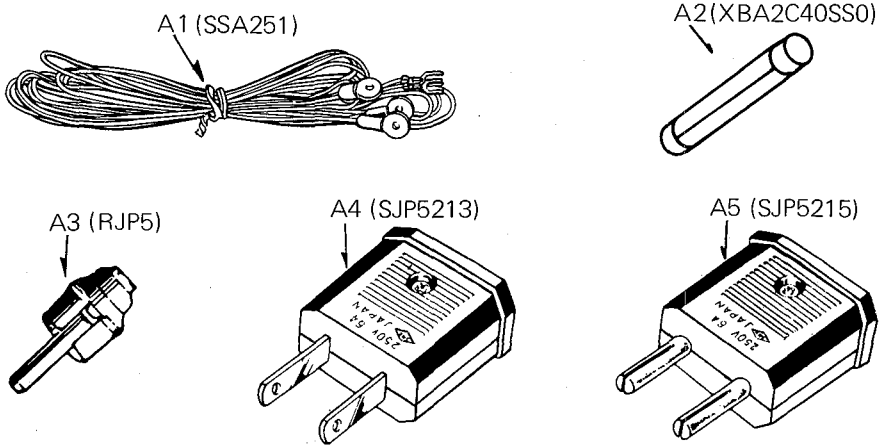
Available in [XG, XGF, XGH, XSD, XSW, XE]



Available in [XG, XGF, XGH, XSD, XSW, XE]



■ ACCESSORIES

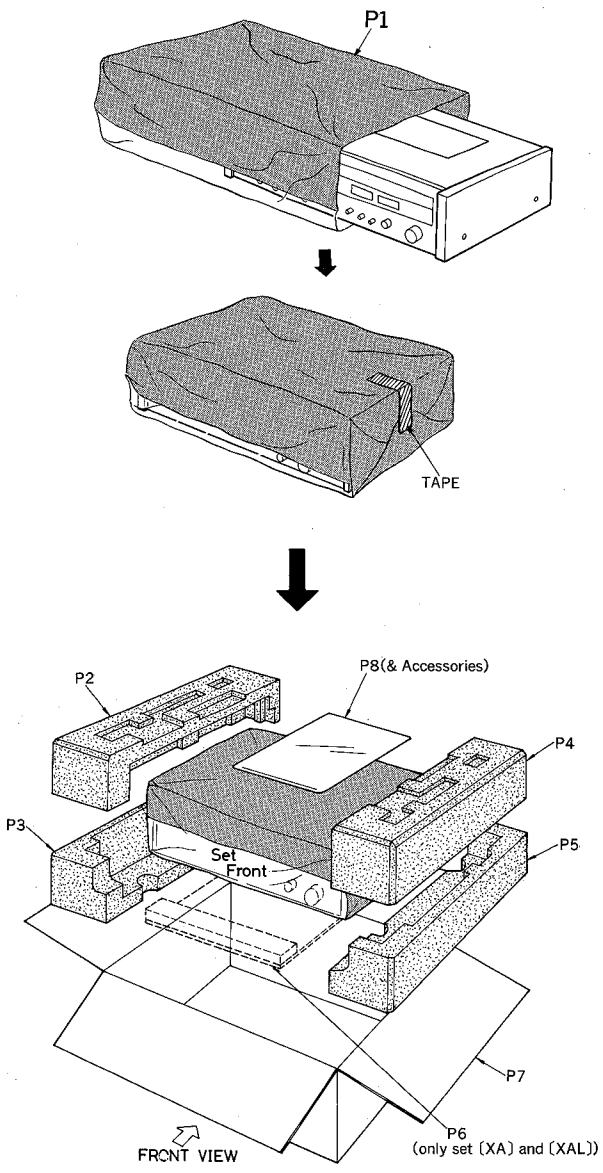


Ref. No.	Part No.	Part Name & Description	Per Set		Remarks
C951	ECQM1H822JZ	Polyester, 0.0082μF, 50V, ± 5%	1		
C952	ECQM1H822JZ	Polyester, 0.0082μF, 50V, ± 5%	1		
C953	ECQM1H153KZ	Polyester, 0.015μF, 50V, ±10%	1		
C954	ECQM1H153KZ	Polyester, 0.015μF, 50V, ±10%	1		
C955	ECEA6V33	Electrolytic, 33μF, 6.3V	1		
C981	ECQM1H473KZ	Polyester, 0.047μF, 50V, ±10%	1		
C982	ECQM1H473KZ	Polyester, 0.047μF, 50V, ±10%	1		
		VARIABLE CAPACITOR			
CV1 ~ 5 (CT1 ~ 5)	ECVC751K144A	Tuning Capacitor (with Trimmers)	1		
		COMPONENT COMBINATIONS			
Z701, 702	RXAF103P22HD	Compgnent Combination, 0.01μF (X2)	2		
		LAMPS			
PL1, 2, 3	XAMR54T	Lamp, Dial Light (12.6V, 0.38A)	3		
		FUSES			
F1	XBA2C40TR0	Fuse, 4AT (250V), Power Source (Except set for [XE, XAL])	1		
F2	XBA2C20TR0	Fuse, 2AT (250V), Power Source	1		
F3	XBA2C10TR0	Fuse, 1AT (250V), Power Source	1		
F4	XBA2C20TR0	Fuse, 2AT (250V), Power Source	1		
F601, 602	XBA2C40SS0	Fuse, 4A (250V), Circuit Protection	2		
		RELAY			
RELAY601	SSY19-2	Relay, Speaker Protection	1		
		SWITCHES			
S1-1 ~ S1-4	SSR67	Switch, Selector	1		
S2, 3, 4, 5	SSH413S	Switch, Tape 1, 2, FM Muting & Loudness	1		
S6, 7	SSH221S	Switch, High Filter & Low Filter	1		
S8	ESB7075	Switch, Power Source(Except set for [XAL])	1		
S8 [XAL]	ESB7083	Switch, Power Source	1		
S9, 10	SSH223S	Switch, Main & Remote Speaker	1		
S11	SSR53S	Switch, Voltage Selector (Except set for [XE, XAL])	1		
S11 [XE] only	SSR53-1S	Switch, Voltage Selector	1		
		CABINET and CHASSIS PARTS			
1	SBN587-1	Knob, Tuning Control	1		
2	SBN589	Knob, Bass, Treble, Balance, Volume Control & Selector Switch	5		
3	XTS3+8CFZ	Screw, Front Panel M'tg	2		
3-1	XTB3+8BFZ	Screw, Front Panel M'tg	2		
4	SGW110A	Panel, Front (Except set for [XA, XAL])	1		○
4 [XA, XAL]	SGW8330	Panel, Front	1		○
5	SGU41	Glass Plate, Front Panel	1		○
6	SGX6491	Escutcheon, Push Switch Button	9		
7	SUS123	Spring, Push Switch Button	9		
8	SBC177	Button, Push Switch	9		
9	SHG511	Bracket, Volume Shaft	5		
10	XNS8	Nut, Tone, Balance, Volume Control	4		
11	XWV8	Washer (Spring), Tone, Balance, Volume Control	4		
12	XNS9	Nut, Headphones Jack & Selector Switch	2		
13	XWV9	Washer (Spring), Selector Switch	1		
14	SDT8035S	Shaft, Tuning Control Ass'y	1		*

Ref. No.	Part No.	Part Name & Description	Per Set	Remarks
15	SMN1401	Bracket, LED (D302) (Except set for [XA, XAL])	1	*
15 [XA, XAL]	SMN1511	Bracket, LED (D302)	1	*○
16	XCJ6P118-A	Jack, Headphones	1	
17	XTV3+8C	Screw, Power Switch Bracket M'tg	2	
18	SMN1399	Bracket, Power Switch	1	*
19	XTB3+8BFZ	Screw, Dial Light Plate M'tg	5	
20	SHR401-1	Lock Pin, Dial Scale	2	
21	SDH421-1	Plate, Dial Light (Except set for [XA, XAL])	1	*○
21 [XA, XAL]	SDH393-3	Plate, Dial Light	1	*○
22	SKD3110	Scale, Dial	1	*○
23	SHP29	Paper, Pointer Slide	1	
24	SDP1113	Pointer, Dial	1	*
25	SSM111	Meter, Tuning & Signal	1	
27	XTV3+8C	Screw, Meter Bracket M'tg	1	
28	SUM17	Bracket, Meter	1	*
29	SHD3XIF	Screw, Pulley M'tg	4	*
30	SDR1	Pulley, Dial	4	
31	XTV3+8C	Screw, Reflector Plate M'tg	3	
32	XTB3+8BFZ	Screw, Reflector Plate M'tg	2	
33	SJS5611	Connector, 6 pin	1	
34	XTB3+8BFZ	Screw, Power Transistor Bracket M'tg	6	
35	SUW1045	Bracket, Power Transistor	2	*○
36	SUW1047	Bracket, Power Transistor	2	*○
37	XTB3+8BFZ	Screw, Diode Heat Sink M'tg	2	
38	SMY331	Heat Sink, Diode	1	*○
39	SMCA122	Ground Terminal	1	*
40	SDZ051-1	Cord, Dial 78¾" (2m)	1 roll	
41	SDSA4121	Spring, Dial Cord	1	
42	SDD47-1	Drum, Dial Cord	1	
43	SYUA5370M	Bottom Board with feet Ass'y	1	*○
44	XTN3+8B	Screw, Bottom Board M'tg	8	
44-1	XWG3	Washer, Bottom Board Screw	8	
45	SQX4487	Caution, Label, Bottom Board	1	
46	SJF8003	Terminal, Inputs & Antennas	1	
47	SJF8007-1	Terminal, Speaker	1	
48 [XA]	SGP570-1A	Rear Panel	1	○
48 [XG, XGH, XGF]	SGP570-1B	Rear Panel	1	○
48 [XSD, XSW]	SGPA5370D	Rear Panel, SGP570-1B with Name Plate (SGT14030)	1	○
48 [XE]	SGPA5370E	Rear Panel, SGP570-1B with Name Plate (SGT14010)	1	○
48 [XAL]	SGP570-2A	Rear Panel	1	
49	XTB3+8BFZ	Screw, Rear Panel M'tg	6	
50	SUW973-2	Bracket, Cabinet	2	*○
51	SHR401-1	Lock Pin, Input, Antenna & Speaker Terminal	6	
52	SUV337	Cover, Circuit Protection Fuses	1	*
53	XTB3+8BFZ	Screw, Circuit Protection Fuses Cover M'tg	1	
54 [XA] only	SJS9205-1	Socket, AC Outlet	2	
55 [XA] only	XTN3+8BFZ	Screw, AC Outlet Socket M'tg	4	
56	SHR127	Bushing, AC Cord (Except set for [XE,XAL])	1	
56 [XE]	SHR129	Bushing, AC Cord	1	
56 [XAL]	SHR131	Bushing, AC Cord	1	
57 [XA, XG, XGF]	SJA97	AC Cord, with Plug	1	
57 [XGH, XSD]	SJA81	AC Cord, with Plug	1	
57 [XSW]	**SJA68**	AC Cord, with Plug	1	
57 [XE]	SJA99	AC Cord	1	
57 [XAL]	SJA79	AC Cord, with Plug	1	
58 [XA, XAL]	XTB4+35FFZ	Screw, Cabinet M'tg	4	
58	XTB4+12FFZ	Screw, Cabinet M'tg (Except set for [XA, XAL])	4	
59	XWA4BFZ	Washer (Spring), Cabinet Screw	4	
60	XWG5FZ	Washer, Cabinet Screw	4	
61 [XA, XAL]	SKA9070W	Cabinet, Brown Wooden	1	○
61 [XG, XGH, XGF]	SKA9370W	Cabinet, Black	1	○
61 [XSD, XSW]	SKA9390W	Cabinet, Black	1	○
61 [XE]	SKA9391W	Cabinet, Brown Wooden	1	○
62	SQXA4112	Caution Label, Cabinet Screw (Except set for [XAL])	1	
63	RJS31-1	Socket, Tape Deck Connection (DIN)	1	
64	XSB3+8BFZ	Screw, Voltage Selector Switch M'tg (Except set for [XAL])	2	
65	XTN3+8FZ	Screw, DIN Socket M'tg	2	
65-1	XWC3B	Washer, DIN Socket Screw	2	
66	SGP9033	Cover Plate, Rear Panel Hole (Except set for [XA])	1	
67	SUM17	Escutcheon, Dial Light Plate (Except set for [XA, XAL])	1	
ACCESSORIES				
A1	SSA251	Cord, FM Feeder Antenna	1	
A2	XBA2C40SS0	Fuse, 4A (250V), Circuit Protection	2	
A3	RJP5	Pin Plug	4	
A4 [XA] only	SJP5213	Plug Adapter, AC Power	1	
A5 [XA] only	SJP5215	Plug Adapter, AC Power	1	
PACKING				
P1	SPP511	Soft Cover	1	
P2 [XA, XAL]	SPS901-2	Pad, Left Side, Upper	1	○
P2	SPS1055	Pad, Left Side, Upper (Except set for [XA, XAL])	1	○
P3 [XA, XAL]	SPS899	Pad, Left Side, Lower	1	○
P3 [XG, XGH, XGF, XSD, XSW]	SPS1051	Pad, Left Side, Lower	1	○
P3 [XE]	SPS1051-1	Pad, Left Side, Lower	1	○
P4	SPS901-1	Pad, Right Side, Upper	1	○
P4 [XA, XAL]	SPS1057	Pad, Right Side, Upper	1	○
P5 [XA, XAL]	SPS899-1	Pad, Right Side, Lower	1	○
P5 [XG, XGH, XGF, XSD, XSW]	SPS1053	Pad, Right Side, Lower	1	○
P5 [XE]	SPS1053-1	Pad, Right Side Lower	1	○
P6 [XA, XAL] only	SPS1059	Pad, Bottom Side	1	○
P7 [XG]	SPG1129	Carton Box	1	○
P7 [XGH]	SPG1139	Carton Box	1	○
P7 [XGF]	SPG1131	Carton Box	1	○
P7 [XSD]	SPG1141	Carton Box	1	○
P7 [XSW]	SPG1133	Carton Box	1	○
P7 [XE]	SPG1135	Carton Box	1	○
P7 [XA, XAL]	SPG1137	Carton Box	1	○
P8 [XG, XGH, XGF, XSD, XSW, XE]	SQF1615	Instructions Book, Printed Matter	1	○
P8 [XAL]	SQF1621	Instructions Book, Printed Matter	1	○
P8 [XA]	SQF1619	Instructions Book, Printed Matter	1	○

NOTE: * The model [XA] is available in Asia, Latin America, Middle East and Africa only.
* The model [XAL] is available in Australia only.
* The model [XE] is available in England only.
* The model [XGF] is available in France only.
* The model [XSW] is available in Switzerland only.
* The model [XG] is available in Europeanonly.
* The model [XGH] is available in Holland only.
* The model [XSD] is available in Scandinavia only.

■ PACKINGS



SA-5370K

(XSW),(XG), (XGH), (XSD), (XGF)

- This parts list includes only the changes of the SA-5370 (XG), (XGH), (XGF), (XSD) & (XSW) parts list.
- When serricing model SA-5370K this parts list and SA-5370 (XG), (XGH), (XGF), (XSD) & (XSW) parts list should be used together.

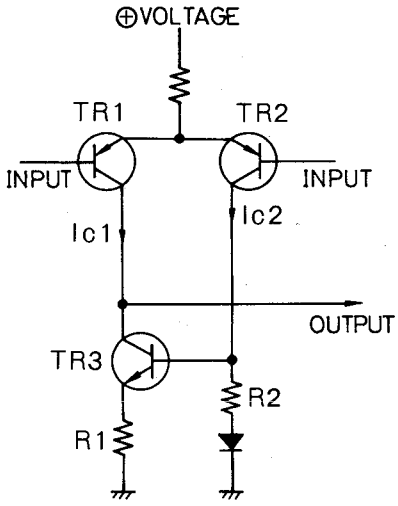
■ CHANGE OF PARTS FROM SA-5170 (XG), (XGH), (XGF), (XSD) & (XSW)

Ref. No.	Change of Part No. SA-5370 ➡ SA-5370K		Part Name & Description	Per Set		Remarks
	Transformer					
T1001	SLT5Q53-W SLT5Q55-W [XE] SLT5Q57-W [XAL]	SLT5Q53-W	Power Transformer	1		
	Switches					
S8	ESB7075 ESB7083 [XAL]	ESB7075	Switch, Power Source	1		
S11	SSR53S SSR53-1S [XE]	SSR53S	Switch, Voltage Selector	1		
	Cabinet and Chassis Parts					
4	SGW110A SGW8330 [XA, XAL]	SGW110B	Panel, Front (Black)	1		O
15	SMN1401 SMN1511 [XA, XAL]	SMN1401	Bracket, Light Emitting Diode (D302)	1		*
21	SDH421-1 SDH393-3 [XA, XAL]	SDH421-2	Plate, Dial Light (Model Name Printed Plate)	1		*O
48	SGP570-1A [XA] SGP570-1B [XG, XGH] SGPA5370D [XSD,XSW] SGPA5370E [XE] SGP570-2A [XAL]	SGP570-1C [XG, XGH, XGF]	Rear Panel (Products for [XG], [XGH] and [XGF] only)	1		O
		SGPA5370KD [XSD, XSW]	Rear Panel, SGP570-1C with Name Plate (SGT 14750) (Products for [XSD] and [XSW] only)	1		O
56	SHR127 SHR129 [XE] SHR131 [XAL]	SHR127	Bushing, AC Cord	1		
57	SJA97 [XA, XG, XGF] SJA81 [XGH, XSD] **SJA68** [XSW] SJA99 [XE] SJA79 [XAL]	SJA97 [XG, XGF]	AC Cord, (Products for [XG] and [XGF] only)	1		
		SJA81[XGH,XSD]	AC Cord, Power Source (Products for [XGH] and [XSD] only)	1		
		SJA68 [XSW]	AC Cord, Power Source (Product for [XSW] only.)	1		
58	XTB4+12FFZ XTB4+35FFZ[XA,XAL]	XTB4+12FFZ	Screw, Cabinet M'tg	4		
61	SKA9070W [XA, XAL] SKA9370W [XG, XGH] SKA9390W[XSD, XSW] SKA9391W [XE]	SKA9370W [XG, XGH,XGF]	Cabinet (Products for [XG], [XGH] and [XGF] only)	1		
		SKA9390W [XSD, XSW,]	Cabinet (Products for [XSD] and [XSW] only)	1		

■ SERVICE AID

At the initial stage of the main amplifier of this unit, the differential amplifier of current mirror load is employed.

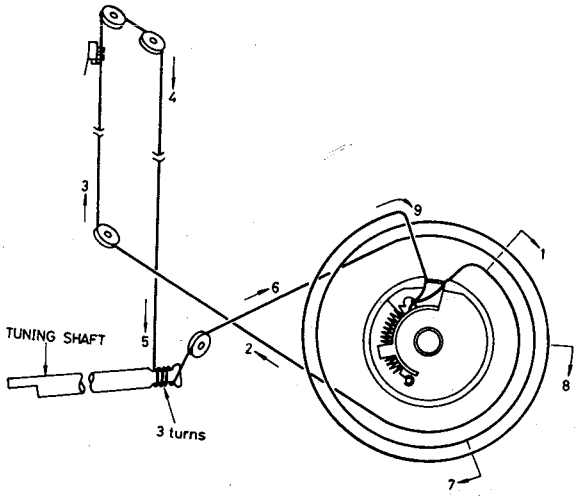
This is a circuit for obtaining the gain higher than that in the conventional circuits, with current in the differential amplifier stage kept constant.
When Ic1 is increased through variation of base voltage of the differential amplifier TR1, Ic2 at TR2 is reduced with consequent decrease in the voltage drop at R2, this in turn reduces VEB of TR3, and thus Ic1 gradually decrease. On the contrary, when Ic1 of TR1 is reduced, Ic2 of TR2 is increased with increase of voltage drop at R2, thus resulting in rise of VEB for TR3 and consequent increase of Ic1. As the characteristics of the differential amplifier, Ic2 is reduced as Ic1 is increased. In this way, Ic1 and Ic2 are kept constant at all times through functioning of TR3.
Constant current means that high impedance is connected to the differential amplifier circuit, and thus large voltage gain can be obtained. Another cause for increasing the voltage gain is the push-pull circuit formed by TR1 and TR3. In the differential amplifier, signal of opposite phase is obtained at the collector of TR1 with respect to the input signal, while in the collector of TR2, signal of the phase as the input is obtained to be further applied to the base of TR3.
Accordingly, signal of opposite phase to the input is developed at the collector of TR3, thus consequently forming the push-pull circuit of TR1 and TR3. In other words, since the amount of NF can be increased with the rise of the gain, improvements in the distortion factor and S/N ratio can be achieved.



(CURRENT MIRROR CIRCUIT)
Fig. 1

■ DIAL CORD INSTALLATION GUIDE

1. Dial cord length is 200 cm (78¾").
2. Tuning gang is positioned at maximum capacity. (Frequency is minimum)
3. Arrow marks (1 ~ 9) indicated correct order and direction of stringing dial cord.



Printed in Japan
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ORDER NO. SD7801-1239-1

Service Manual

Supplement

FM/AM STEREO RECEIVER

Subject: Countermeasure for low filter switch noise

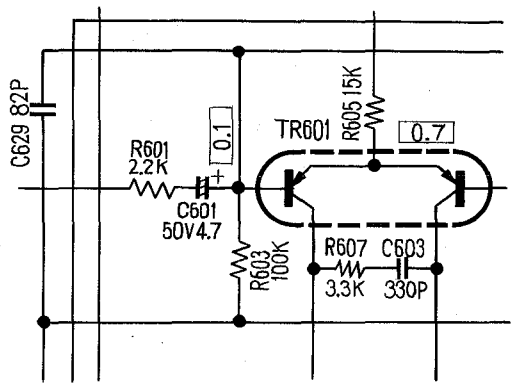
Model No.

SA-5370
SA-5370K

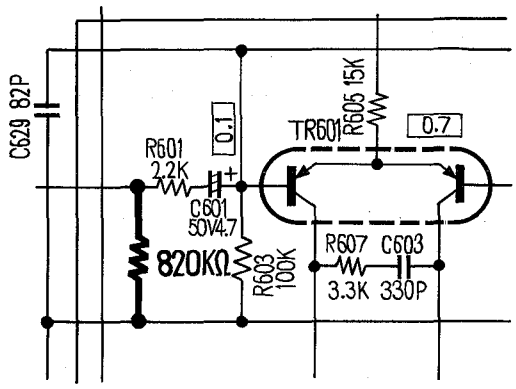
■ **Countermeasure:** Please add 820KΩ to both the left and right channels between terminal ① of the low filter switch and the grounding points i.e., the middle points C953 (C954) and R601 (R602).

■ **Schematic Diagram**

OLD (Left Channel)

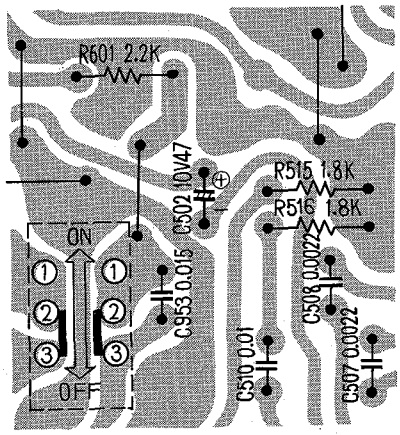


NEW (Left Channel)

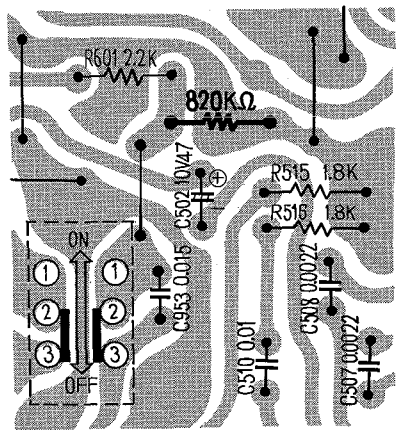


■ **Printed Circuit Baord**

OLD (Left Channel)



NEW (Left Channel)



■ **Parts List**

Addition					
Ref. No.	Part No.	Part Name & Description	Per Set		Remarks
	ERD25TJ824	Carbon, 820KΩ, 1/4W, ±5%	2		

Technics

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